



## A STUDY ON EXPORT PERFORMANCE OF COFFEE IN INDIA

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### ABSTRACT

India is the growing exporter of coffee among world competitors. The area, production, and export quantity of coffee registered a similar and fluctuation growth rate during the overall study period. It's indicating that there is scope for increasing the coffee area and production for strengthening the coffee exports in India. This should be done by adopting new technology and cultivation practices for coffee growing region. The present study has been conducted to examine the area of production of coffee in India. The focus of the study is to analyse the export performance of coffee in India.

### INTRODUCTION

According to the world trade, coffee (*Coffea arabica*) is the second important commodity after petroleum product. It was first introduced to India during 1600AD from Yemen and planted in the high hills in Baba Budan's Courtyard, Chikmagalur district of Karnataka. Commercially, the coffee was cultivated in two main species, that is Coffee Arabica and Coffee canephora, popularly known as arabica coffee and robusta coffee. Indian coffee is mainly grown in the Western Ghats spread over Karnataka, Kerala and Tamil Nadu. Now, India has 16 unique coffee varieties. That has been grown under a canopy of natural shade in ecologically sensitive regions of the Western and Eastern Ghats. Coffee contains some antioxidants and beneficial nutrients that can improve health. Coffee mainly contains caffeine substance, which can scientifically prove to be helpful in improving mental performance. India has emerged as the seventh largest coffee producer globally, after Brazil, Vietnam, Columbia, Indonesia, Ethiopia and Honduras.

### POSITION OF COFFEE IN INDIA

The area under coffee plantation in India has increased by more than three times, from 120321 hectares in 1960-61 to 397147 hectares in 2015-16. This phenomenal increase in area could be attributed both to the increase in production and improvement in productivity levels. In 2015, coffee was cultivated in 434436 hectares in all over India, its cover in Karnataka (235438 hectares) 54 per cent, 20 per cent in Kerala (85501 hectares), 8 per cent in Tamil Nadu (34932 hectares) and remaining 18 per cent covered by non-traditional areas (78565 hectares). The total production and yield of coffee in India were 348000 tonnes and 876-kilo gram per hectare of yield. Out of it, 251520 tonnes (72%) produced in Karnataka, followed by Kerala 69230 tonnes (20%) and Tamil Nadu 17295 tonnes (5%). While other non-traditional area produced 9955 tonnes which are around three per cent of the total production of coffee. India has emerged as the seventh largest coffee producer globally, after Brazil, Vietnam, Columbia, Indonesia, Ethiopia and Honduras. India accounted for 4.05 per cent of global coffee production. Export earnings have increased from Rs 507.82 crore (138.83 million US\$) in 1993 to Rs 5157.87 crore (807.52 million US\$). Italy was the largest export market for Indian coffee, importing

59894 tonnes (22% of India's total exports). It was followed by Germany (25021 tonnes), Russian Federation (21068 tonnes), Turkey (15857 tonnes) and Belgium (12082 tonnes). Apart from this export remaining production of coffee was consumed by domestic people of India. The domestic consumption of coffee was gradually increasing year to year.

### SCOPE OF THE STUDY

The study covers only the export and production performance of coffee in India because of non-availability of data for conducting the study for many countries and the detailed analysis of Coffee performance will be studied in the future research.

### Objectives Of The Study

- To analyze the export performance of coffee in India
- To investigate the revenue generated by export performance of coffee in India.
- To evaluate the top five export destinations of coffee in India.
- To offer suggestions to improve the overall performance of coffee in India, based on the findings.

### REVIEW OF LITERATURE

- **Pascucci, (2018)** analyzed the competitive position of Italian roasting firms in the international market, thus developing a multidimensional framework for measuring industry export competitiveness. Considering that the objective is to evaluate the export competitiveness of Italian roasting firms, the author chooses "positive" and "ex-post" indicators, combined in a multidimensional and a multivariable framework. The two dimensions of competitiveness implemented are competitive performance and competitive potential; the author used four indices to evaluate the first dimension (export market share, net export share, net export index, revealed comparative advantage) and three indices for the second dimension (unit export price, relative quality index, relative export growth).
- **Bekele & Mersha, (2019)** study analyses the determinant factors of Ethiopia's coffee exports (ECE) performance, in the dimension of export sales, via a more realistic model

application, dynamic panel gravity model. It commences with the disintegration of the determinant into supply- and demand-side factors. It used short panel data that comprise 71 countries of consistent Ethiopia's coffee importers for the period of 11 years from 2005 to 2015. The panel unit root test of Harris–Tzavalis was made for each variable and applied the first difference transformation for the variables that had a unit root. The system model of a linear dynamic panel gravity model was specified and estimated with two-step general method moment estimation approach. The model results suggested that lagged ECE performance, real gross domestic product (GDP) of importing countries, Ethiopian population, Ethiopian real GDP, openness to trade of importing countries, Ethiopian institutional quality, and weighted distance were found to be the determinant factors of Ethiopia's coffee exports performance. The study also implied policies that would promote institutional quality or permits favorable market environments, supply capacity, trade liberalization, and destination with relatively cheaper transportation costs in order to progress Ethiopia's coffee exports performance.

## RESULTS AND DISCUSSIONS

### 1. Exports of Coffee to Italy (Quantity in MT)

| Year     | Italy      | Annual Growth Rate (%) |
|----------|------------|------------------------|
| 2012-13  | 75456      |                        |
| 2013-14  | 60173      | -20.25                 |
| 2014-15  | 77361      | 28.56                  |
| 2015-16  | 83560      | 8.01                   |
| 2016-17  | 79024      | -5.43                  |
| 2017-18  | 76452      | -3.25                  |
| 2018-19  | 63605      | -16.80                 |
| 2019-20* | 42259      | -33.56                 |
| CAGR     | -6.99      |                        |
| Maximum  | 83560      |                        |
| Minimum  | 42259      |                        |
| Mean     | 69736.25   |                        |
| Std. Dev | 13613.8546 |                        |

Source: Coffee Board

Includes re-exports from 2004 onwards \* Based on export permits

The table presented above gives the exports of Coffee in quantity for Italy over the study period, its annual growth rate, compound annual growth rate and basic descriptive statistics. The highest quantity of the product for Italy was exported for the year 2015-16 which stands at 83560 MT. The lowest quantity of the product for Italy was exported for the year 2019-20 which stands at 42259 MT. The mean value recorded for the exported quantity for Italy was recorded at 69736.25 MT. The highest annual growth rate in export quantity for Italy was recorded at 28.56 percent for the year 2014-15. The lowest annual growth rate was recorded for Italy at a negative rate of 33.56 percent for the year 2019-20. The compound annual growth rate of the exports of Coffee for Italy stands at negative of 6.99 percent revealing that there is a decrease in the exports over the study period.

### 2. Exports of Coffee to Germany (Quantity in MT)

| Year     | Germany     | Annual Growth Rate (%) |
|----------|-------------|------------------------|
| 2012-13  | 31529       |                        |
| 2013-14  | 25222       | -20.00                 |
| 2014-15  | 28286       | 12.15                  |
| 2015-16  | 34804       | 23.04                  |
| 2016-17  | 39128       | 12.42                  |
| 2017-18  | 31818       | -18.68                 |
| 2018-19  | 34099       | 7.17                   |
| 2019-20* | 25457       | -25.34                 |
| CAGR     | -2.64       |                        |
| Maximum  | 39128       |                        |
| Minimum  | 25222       |                        |
| Mean     | 31292.875   |                        |
| Std. Dev | 4808.880013 |                        |

Source: Coffee Board

Includes re-exports from 2004 onwards \* Based on export permits

The table presented above gives the exports of Coffee in quantity for Germany over the study period, its annual growth rate, compound annual growth rate and basic descriptive statistics. The highest quantity of the product for Germany was exported for the year 2016-17 which stands at 39128 MT. The lowest quantity of the product for Germany was exported for the year 2013-14 which stands at 25222 MT. The mean value recorded for the exported quantity for Germany was recorded at 31292.875 MT. The highest annual growth rate in export quantity for Germany was recorded at 23.04 percent for the year 2015-16. The lowest annual growth rate was recorded for Germany at a negative rate of 25.34 percent for the year 2019-20. The compound annual growth rate of the exports of Coffee for Germany stands at negative of 2.64 percent revealing that there is a decrease in the exports over the study period.

### 3. Exports of Coffee to Russia (Quantity in MT)

| Year     | Russia      | Annual Growth Rate (%) |
|----------|-------------|------------------------|
| 2012-13  | 16103       |                        |
| 2013-14  | 21135       | 31.25                  |
| 2014-15  | 25306       | 19.74                  |
| 2015-16  | 28805       | 13.83                  |
| 2016-17  | 26345       | -8.54                  |
| 2017-18  | 22293       | -15.38                 |
| 2018-19  | 26862       | 20.50                  |
| 2019-20* | 11241       | -58.15                 |
| CAGR     | -4.39       |                        |
| Maximum  | 28805       |                        |
| Minimum  | 11241       |                        |
| Mean     | 22261.25    |                        |
| Std. Dev | 5983.005474 |                        |

Source: Coffee Board

Includes re-exports from 2004 onwards \* Based on export permits

The table presented above gives the exports of Coffee in quantity for Russia over the study period, its annual growth rate,

compound annual growth rate and basic descriptive statistics. The highest quantity of the product for Russia was exported for the year 2015-16 which stands at 28805 MT. The lowest quantity of the product for Russia was exported for the year 2019-20 which stands at 11241 MT. The mean value recorded for the exported quantity for Russia was recorded at 22261.25 MT. The highest annual growth rate in export quantity for Russia was recorded at 31.25 percent for the year 2013-14. The lowest annual growth rate was recorded for Russia at a negative rate of 58.15 percent for the year 2019-20. The compound annual growth rate of the exports of Coffee for Russia stands at negative rate of 4.39 percent revealing that there is a decrease in the exports over the study period.

#### 4. Exports of Coffee to Belgium (Quantity in MT)

| Year     | Belgium     | Annual Growth Rate (%) |
|----------|-------------|------------------------|
| 2012-13  | 17895       |                        |
| 2013-14  | 12092       | -32.43                 |
| 2014-15  | 15909       | 31.57                  |
| 2015-16  | 19994       | 25.68                  |
| 2016-17  | 18106       | -9.44                  |
| 2017-18  | 18510       | 2.23                   |
| 2018-19  | 19941       | 7.73                   |
| 2019-20* | 16552       | -17.00                 |
| CAGR     | -0.97       |                        |
| Maximum  | 19994       |                        |
| Minimum  | 12092       |                        |
| Mean     | 17374.875   |                        |
| Std. Dev | 2571.077508 |                        |

Source: Coffee Board

Includes re-exports from 2004 onwards \* Based on export permits

The table presented above gives the exports of Coffee in quantity for Belgium over the study period, its annual growth rate, compound annual growth rate and basic descriptive statistics. The highest quantity of the product for Belgium was exported for the year 2018-19 which stands at 19941 MT. The lowest quantity of the product for Belgium was exported for the year 2013-14 which stands at 12092 MT. The mean value recorded for the exported quantity for Belgium was recorded at 17374.875 MT. The highest annual growth rate in export quantity for Belgium was recorded at 31.57 percent for the year 2014-15. The lowest annual growth rate was recorded for Belgium at a negative rate of 32.43 percent for the year 2013-14. The compound annual growth rate of the exports of Coffee for Belgium stands at negative rate of 0.97 percent revealing that there is a decrease in the exports over the study period.

#### 5. Exports of Coffee to Turkey (Quantity in MT)

| Year     | Belgium    | Annual Growth Rate (%) |
|----------|------------|------------------------|
| 2012-13  | 11859      |                        |
| 2013-14  | 15526      | 30.92                  |
| 2014-15  | 15180      | -2.23                  |
| 2015-16  | 17230      | 13.50                  |
| 2016-17  | 15951      | -7.42                  |
| 2017-18  | 14742      | -7.58                  |
| 2018-19  | 10723      | -27.26                 |
| 2019-20* | 4293       | -59.96                 |
| CAGR     | -11.93     |                        |
| Maximum  | 17230      |                        |
| Minimum  | 4293       |                        |
| Mean     | 13188      |                        |
| Std. Dev | 4188.15759 |                        |

Source: Coffee Board

Includes re-exports from 2004 onwards \* Based on export permits

The table presented above gives the exports of Coffee in quantity for Turkey over the study period, its annual growth rate, compound annual growth rate and basic descriptive statistics. The highest quantity of the product for Turkey was exported for the year 2015-16 which stands at 17230 MT. The lowest quantity of the product for Turkey was exported for the year 2019-20 which stands at 4293 MT. The mean value recorded for the exported quantity for Turkey was recorded at 13188 MT. The highest annual growth rate in export quantity for Turkey was recorded at 30.92 percent for the year 2013-14. The lowest annual growth rate was recorded for Turkey at a negative rate of 59.96 percent for the year 2019-20. The compound annual growth rate of the exports of Coffee for Turkey stands at negative rate of 11.93 percent revealing that there is a decrease in the exports over the study period.

#### 6. Exports of Coffee to Italy (Value In Crores)

| Year     | Italy       | Annual Growth Rate (%) |
|----------|-------------|------------------------|
| 2012-13  | 1093.64     |                        |
| 2013-14  | 1074.8      | -1.72                  |
| 2014-15  | 1007.47     | -6.26                  |
| 2015-16  | 1113.01     | 10.48                  |
| 2016-17  | 1154.78     | 3.75                   |
| 2017-18  | 1120.66     | -2.95                  |
| 2018-19  | 1167.95     | 4.22                   |
| 2019-20* | 915.85      | -21.58                 |
| CAGR     | -2.19       |                        |
| Maximum  | 1167.95     |                        |
| Minimum  | 915.85      |                        |
| Mean     | 1081.02     |                        |
| Std. Dev | 83.22150855 |                        |

Source: Coffee Board

Includes re-exports from 2004 onwards \* Based on export permit

The table presented above gives the exports of Coffee for Italy in value over the study period, its annual growth rate, compound

annual growth rate and basic descriptive statistics. The highest value generated from exports of the product for Italy was recorded for the year 2018-19 which stands at 1167.95 INR crores. The lowest value generated from exports of the product for Italy was recorded for the year 2019-20 which stands at 915.85 INR crores. The mean value recorded for the exported value for Italy was recorded at 1081.02 INR crores. The highest annual growth rate in export value for Italy was recorded at 10.48 percent for the year 2015-16. The lowest annual growth rate was recorded at a negative rate of 21.58 percent for the year 2019-20. The compound annual growth rate of the export value of Coffee for Italy stands at a negative of 2.19 percent. This reveals that there is a slight decrease in the exports over the study period.

#### 7. Exports of Coffee to Germany (Value In Crores)

| Year     | Germany     | Annual Growth Rate (%) |
|----------|-------------|------------------------|
| 2012-13  | 387.79      |                        |
| 2013-14  | 471.57      | 21.60                  |
| 2014-15  | 472.95      | 0.29                   |
| 2015-16  | 481.32      | 1.77                   |
| 2016-17  | 547.88      | 13.83                  |
| 2017-18  | 631.07      | 15.18                  |
| 2018-19  | 510.4       | -19.12                 |
| 2019-20* | 547.55      | 7.28                   |
| CAGR     | 4.41        |                        |
| Maximum  | 631.07      |                        |
| Minimum  | 387.79      |                        |
| Mean     | 506.31625   |                        |
| Std. Dev | 71.71554483 |                        |

Source: Coffee Board

Includes re-exports from 2004 onwards \* Based on export permit

The table presented above gives the exports of Coffee for Germany in value over the study period, its annual growth rate, compound annual growth rate and basic descriptive statistics. The highest value generated from exports of the product for Germany was recorded for the year 2017-18 which stands at 631.07 INR crores. The lowest value generated from exports of the product for Germany was recorded for the year 2012-13 which stands at 387.79 INR crores. The mean value recorded for the exported value for Germany was recorded at 506.31 INR crores. The highest annual growth rate in export value for Germany was recorded at 21.60 percent for the year 2013-14. The lowest annual growth rate was recorded at a negative rate of 19.12 percent for the year 2018-19. The compound annual growth rate of the export value of Coffee for Germany stands at 4.41 percent. This reveals that there is a slight increase in the exports over the study period.

#### 8. Exports of Coffee to Russia (Value In Crores)

| Year     | Russia      | Annual Growth Rate (%) |
|----------|-------------|------------------------|
| 2012-13  | 409.18      |                        |
| 2013-14  | 272.21      | -33.47                 |
| 2014-15  | 372.48      | 36.84                  |
| 2015-16  | 440.16      | 18.17                  |
| 2016-17  | 501.39      | 13.91                  |
| 2017-18  | 452.69      | -9.71                  |
| 2018-19  | 452.65      | -0.01                  |
| 2019-20* | 443         | -2.13                  |
| CAGR     | 1.00        |                        |
| Maximum  | 501.39      |                        |
| Minimum  | 272.21      |                        |
| Mean     | 417.97      |                        |
| Std. Dev | 69.56862593 |                        |

Source: Coffee Board

Includes re-exports from 2004 onwards \* Based on export permit

The table presented above gives the exports of Coffee for Russia in value over the study period, its annual growth rate, compound annual growth rate and basic descriptive statistics. The highest value generated from exports of the product for Russia was recorded for the year 2016-17 which stands at 501.39 INR crores. The lowest value generated from exports of the product for Russia was recorded for the year 2013-14 which stands at 272.21 INR crores. The mean value recorded for the exported value for Russia was recorded at 417.97 INR crores. The highest annual growth rate in export value for Russia was recorded at 36.84 percent for the year 2014-15. The lowest annual growth rate was recorded at a negative rate of 33.47 percent for the year 2013-14. The compound annual growth rate of the export value of Coffee for Russia stands at 1 percent. This reveals that there is an increase in the exports over the study period.

#### 9. Exports of Coffee to Belgium (Value In Crores)

| Year     | Belgium     | Annual Growth Rate (%) |
|----------|-------------|------------------------|
| 2012-13  | 335.07      |                        |
| 2013-14  | 298.36      | -10.96                 |
| 2014-15  | 249.11      | -16.51                 |
| 2015-16  | 297.57      | 19.45                  |
| 2016-17  | 366.83      | 23.28                  |
| 2017-18  | 372.98      | 1.68                   |
| 2018-19  | 326.11      | -12.57                 |
| 2019-20* | 333.54      | 2.28                   |
| CAGR     | -0.06       |                        |
| Maximum  | 372.98      |                        |
| Minimum  | 249.11      |                        |
| Mean     | 322.44625   |                        |
| Std. Dev | 40.34956432 |                        |

Source: Coffee Board

Includes re-exports from 2004 onwards \* Based on export permit

The table presented above gives the exports of Coffee for

Belgium in value over the study period, its annual growth rate, compound annual growth rate and basic descriptive statistics. The highest value generated from exports of the product for Belgium was recorded for the year 2017-18 which stands at 372.98 INR crores. The lowest value generated from exports of the product for Belgium was recorded for the year 2014-15 which stands at 249.11 INR crores. The mean value recorded for the exported value for Belgium was recorded at 322.44 INR crores. The highest annual growth rate in export value for Belgium was recorded at 23.28 percent for the year 2016-17. The lowest annual growth rate was recorded at a negative rate of 16.51 percent for the year 2014-15. The compound annual growth rate of the export value of Coffee for Belgium stands at negative rate of 0.06 percent. This reveals that there is a slight decrease

#### 10. Exports of Coffee to Turkey (Value In Crores)

| Year     | Belgium     | Annual Growth Rate (%) |
|----------|-------------|------------------------|
| 2012-13  | 126.6       |                        |
| 2013-14  | 204.13      | 61.24                  |
| 2014-15  | 278.16      | 36.27                  |
| 2015-16  | 264.92      | -4.76                  |
| 2016-17  | 280.96      | 6.05                   |
| 2017-18  | 272.23      | -3.11                  |
| 2018-19  | 235.81      | -13.38                 |
| 2019-20* | 157.01      | -33.42                 |
| CAGR     | 2.73        |                        |
| Maximum  | 280.96      |                        |
| Minimum  | 126.6       |                        |
| Mean     | 227.4775    |                        |
| Std. Dev | 59.26971709 |                        |

Source: Coffee Board

Includes re-exports from 2004 onwards \* Based on export permit

The table presented above gives the exports of Coffee for Turkey in value over the study period, its annual growth rate, compound annual growth rate and basic descriptive statistics. The highest value generated from exports of the product for Turkey was recorded for the year 2016-17 which stands at 280.96 INR crores. The lowest value generated from exports of the product for Turkey was recorded for the year 2012-13 which stands at 126.6 INR crores. The mean value recorded for the exported value for Turkey was recorded at 227.47 INR crores. The highest annual growth rate in export value for Turkey was recorded at 61.24 percent for the year 2013-14. The lowest annual growth rate was recorded at a negative rate of 33.42 percent for the year 2019-20. The compound annual growth rate of the export value of Coffee for Turkey stands at 2.73 percent. This reveals that there is a slight increase in the exports over the study period.

#### CONCLUSION

The present study attempted to explore the quantity of coffee that are being exported from India and the respective revenue generated from the exports of betel leaves and nuts. The top five export destinations of the Indian coffee and the associated

revenue generated from the trade with these countries have also been studied. The present study will help the policymakers as well as the traders in understanding the potential market and the ability of the sector to generate revenue.

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