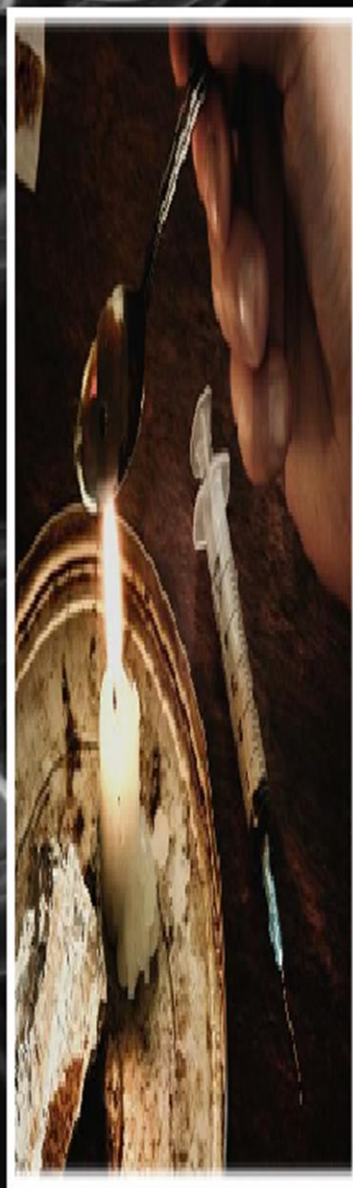




# Drug Trafficking Analysis In INDIA



# Data Trafficking Analysis In INDIA

Submitted by

Mr. Pankaj Patil

Mr. Jaykishan Dave

Mr. Sahil Patil

Ms. Nitu Tiwari

Mr. Arpit Rathwa

Under the guidance of

Prof. (Mr). Vipul Kalamkar



Submitted to

**MAHARAJA SAYAJIRAO UNIVERSITY  
OF BARODA  
FACULTY OF SCIENCE  
DEPARTMENT OF STATISTICS**

(2022-2023)

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## **ACKNOWLEDGEMENT**

The completion of this project is a dream come true with the help of supporters. The success and outcome of this project required a lot of guidance and assistance from many people and we are extremely privileged to have got all this along with completion of our project. All that we have done is only due to best supervision for that we would really like to show gratitude towards them.

On this note, firstly we want to convey our regards to Prof. Vipul Kalamkar (Professor and Head, Department of Statistics, Maharaja Sayajirao University of Baroda, Vadodara) for seeking us the desire permission for this project.

It was also a great pleasure to work under them as our guide we thank them for their guidance, kind suggestions, co-operation and constant encouragement which entitled us to take every forward step in our project.

We would like to thanks our beloved friends and our parents for their moral support and blessings.

**Mr. Pankaj Patil**

**Mr. Jaykishan Dave**

**Mr. Sahil Patil**

**Ms. Nitu Tiwari**

**Mr. Arpit Rathwa**

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## **CERTIFICATE**

This to certify that, Mr. Pankaj Patil, Mr. Jaykishan Dave, Mr. Sahil Patil, Ms. Nitu Tiwari, Mr. Arpit Rathwa students of M.Sc. (Statistics) at Maharaja Sayajirao University, Vadodara. They have successfully completed their project work entitled "Drug Trafficking Analysis in INDIA".

As a part of M.Sc. (Statistics) program under my guidance and supervision during the academic year 2022-2023.

Place: Vadodara

Date:

Prof. (Mr). Vipul Kalamkar  
(Project Guide)

Department of Statistics  
Maharaja Sayajirao University, Vadodara

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# Chapter 1

## Introduction

### 1.1 Motivation

Being a student of M.Sc. Prev (Statistics), we have studied a course on “Time Series Analysis” during our T.Y. B.Sc., We are more interested to know how it will work on real life data where we have used some time series tools. In this regard Prof. Vipul Kalamkar sir has allowed us to take the real-life data.

### 1.2 Data Profile

Our Project is on Drug Trafficking Analysis in India. This analysis is completely depending upon the secondary data which is available from the annual report of NCB. This project is from year 2011 and up to year 2020.

Where we have use some of datasets:

- The first dataset indicates:
  - I. Drug seizure in kg from 2011-2020
  - II. The no. of cases registered for drug crime from 2011-2020
  - III. Month wise data of seizure of drugs in kg and No. of cases in India
  - IV. Data including Gender and Age.
  - V. State-wise data of Drugs seizure.

- The second dataset indicates:

State wise seizure for various types of drugs in kg.

### 1.3 Objective of this Project

- a. To study the drug trafficking scenario in India.
- b. What are the various typed of drug smuggled in India?
- c. To observe which type of drug is more frequently smuggled or found & which is negligible.
- d. Aim to check whether drugs cases differ significantly across age group and gender.
- e. To identify drug trafficking scenario in various states and how this pattern changes every year.
- f. To study the drug crime behaviour and trend for drug crimes in each kind of drug every year.

## 1.4 Scope of the Project

This project is helpful to know the reality of smuggling and illegal uses of drugs for all of us. On the completion of this work, we will have the experience to control the time series problem, managing the data in correct manner and even part of Analysis.



## Chapter 2

### Project Information

#### 2.1 Abstract

The drug related problems are rising day by day in India. Mostly young generation and middle age generation people are addicted from the various kind of drugs. The drug addiction is dangerous and harmful for health and for society. The drug trafficking is not only for a single place but it is beyond the boundaries of the India. While throughout the analysis we understand that drug ‘Ganja’ is frequently used in India. So however, the government of India has been taken a strictly action toward the drug trafficking. Even some laws are also formed by Government of India.

#### 2.2 Introduction

Now a days, drug trafficking has been increased day by day. We are saying this on the basis of annual reports published by Narcotics Control Bureau of India. While reviewing of all these annual reports we understood lot of things such as:





- What is drug trafficking?

The drug trafficking is a smuggling of hubs (drugs/hubs which are banned to illegal practicing) from one place to another. People belongs with the drug trafficking are known as sleeper cells.

- There are three countries known as golden triangle such as Myanmar, Laos and Thailand.
- And there is also a golden crescent such as Pakistan, Afghanistan and Iran. So, these golden crescents provide the context for drug trafficking.
- The smuggling of drugs has been done in several types of transportations such as by road, by sea and by plane. The smuggling through the different routes gets linked with other countries and also makes India vulnerable to drug trafficking.
- Throughout the analysis we knew that the east part of India is maximally involved in drug trafficking.
- There are so many states in India which are involved in drug trafficking such as: Assam, Meghalaya, Nagaland, Maharashtra, Delhi, Punjab and so on.
- There are several types of drugs which, we are going to study: Opium, Heroin, Ganja, Hashish, Cocaine, Acetic Anhydride and Ephedrine.

These all drugs are not made naturally some are also made in laboratory. Some drugs which are made naturally such as: Opium, Ganja, Cocaine. The drugs which are made in laboratory those are also known as synthetic drugs such as: Heroin, Hashish, Ephedrine, Acetic Anhydride.

### • What is the work of India Government throughout the drug trafficking?

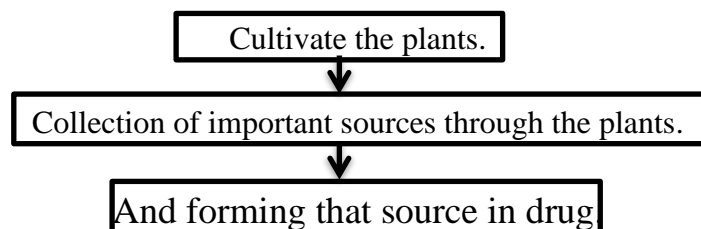
The drug uses are increasing in India very fast. To stop the drug trafficking and to awareness about the drugs and its impact on human health the following agencies are the primary drug enforcement agencies in India:

- The Central Bureau (CNB)
- The Narcotic Control Bureau (NCB)
- Other agencies like the Directorate of Revenue Intelligence, Central Bureau of Investigation, Customs commission, Border Security Force, Sashastra Seema Bal etc.

These agencies playing important role of seizure of illegal drugs and keep an eye on smugglers of various types of drugs. The Government of India developed some laws and the legislative policies over drug related matters. The acts by central government of India are as follows:

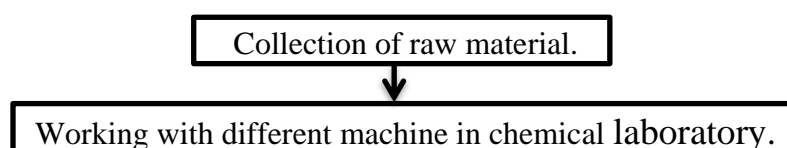
- The Narcotic Drugs and Psychotropic Substances Act, 1985
- Prevention of Illicit Traffic in Narcotic Drug and Psychotropic substances Act, 1988
- Drugs and Cosmetics Act, 1940.

## 2.3 Production of drug which are made naturally



The productions of drug which are made naturally these are actually farmed in large quantity. The essential part is plants are chosen to convert it in herbs.

## 2.4 Production of drugs which are made in laboratory



The raw material will be in liquid form or in powder form. This raw material are been practiced in laboratory to form a new mixture. And that new mixture is known as Drug.

## 2.5 Side-effects of drugs and drug trafficking

Drugs are very harmful for everyone in the human society. And severally increasing rate of drug trafficking will take our country in blacklist. Side effects of drugs are not only on the prestige of country but also on the human health. Lot of people in the world are facing the problems due to sever use of drugs. Some of the diseases are as follows:

1. Diarrhoea	4. Fatigue	7. Heart issues
2. Dizziness	5. Rashes	8. Drowsiness
3. Stomach upset	6. Hives	9. Nausea and vomiting

## Chapter 3 Methodology

### 3.1 Method

We are going to use the method such as

- Multiple Bar Charts.
- Sub-Divided Bar Chart.
- Pareto analysis
- Time Series Plot.
- Double Exponential Smoothing.
- Holt winter method: Holt winter seasonal algorithm and Holt

winter algorithm. Since no parametric model suits to our data that why the interest is to apply nonparametric methods in order to analyse and forecast the data values.

Following are the non-parametric methods that we are going to use:

- i) Holt-Winter seasonal algorithm.
- ii) Double exponential smoothing method

### **3.1.1 Holt-Winter:**

Holt- winter is a model of time series behaviour. Forecasting always requires a model, and Holt-Winter is a way to model three aspects of the time Series: a typical value (average), a slope (trend) over time, and a cyclical repeating pattern (seasonal).

### **3.1.2 Double Exponential Smoothing:**

The Double Exponential Smoothing as a general smoothing method and to provide short-term forecasts when your data have a trend and do not have seasonal component. This procedure calculates the dynamic estimates for two components: level and trend.

### **3.2 Statistical Tools.....**

We are going to use some kind of statistical tools such as:

- a. Microsoft Excel
- b. Minitab
- c. Python
- d. Tableau

## Chapter 4

### Statistical analysis

#### Introduction:

Here the interest is to study the pattern of drug trafficking every year for each type of drug.

**4.1 Narcotic Drugs:** A powerful illegal drug that affects your mind in a harmful way.

#### Opium

Opium is a depressant drug, which means it slows down the messages traveling between your brain and body. The opium poppy (*Papaver somniferum* L.) from which opium is derived is one of the earliest plants of which there is recorded medicinal use.



Opium Crop

\*Opium image

[Click by- Tim Cooper, Web: <https://unsplash.com/s/photos/opium-poppy>]

#### Seizure of Opium in Kg. from 2011-2020

SR.	Year	Seizure by NCB in Kg.	Seizure by Other Orgs in Kg.	Seizure in India in Kg.	Cases in India
Opium					
1	2011	74	2274	2348	892
2	2012	117	3508	3625	876
3	2013	296	2037	2333	881
4	2014	283	1483	1766	717
5	2015	76	1611	1687	860
6	2016	176	2075	2251	933
7	2017	325	2226	2551	1408
8	2018	305	3982	4307	1175

9	2019	394	3941	4488	1494
10	2020	1018	3832	5212	1626

In the above table, year wise seizure of opium by NCB as well as by other organizations are given and the corresponding cases registered in India are also given.

Note that there is one more column in the table 'Seizure in India in Kg.', it is the total of the columns 'Seizure by NCB in Kg.' and 'Seizure by other organizations in Kg.'.

### Other organization includes :

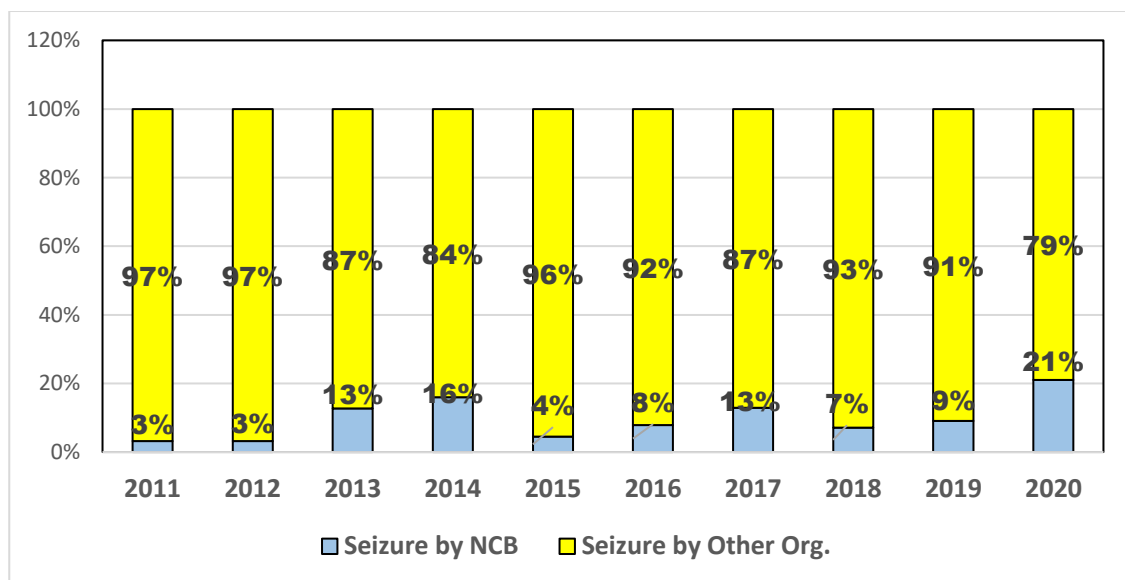
Directorate of revenue intelligence

Custom and central Bureau of Narcotics

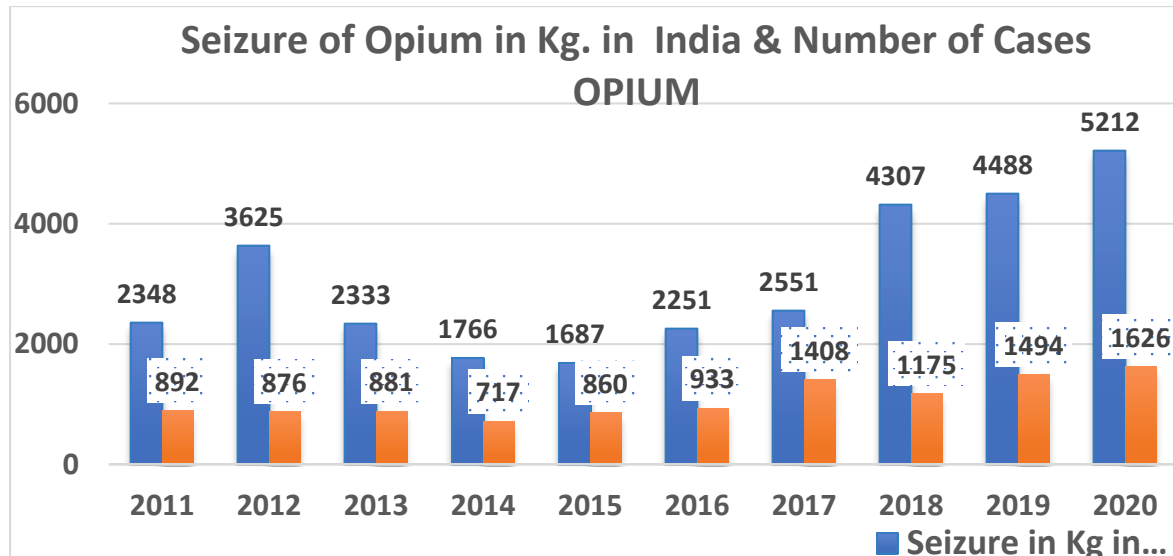
Local Police and Excise

## Exploratory Data Analysis

### Seizure of Opium in Kg. by NCB and other organizations



Here, from the above plot that the seizure of Opium in Kg. by other organizations is larger than the NCB. And maximum quantity of opium is seizure in 2011 ,2012 and 2015 by other organizations.



Seizure of Opium in India and Number of Cases

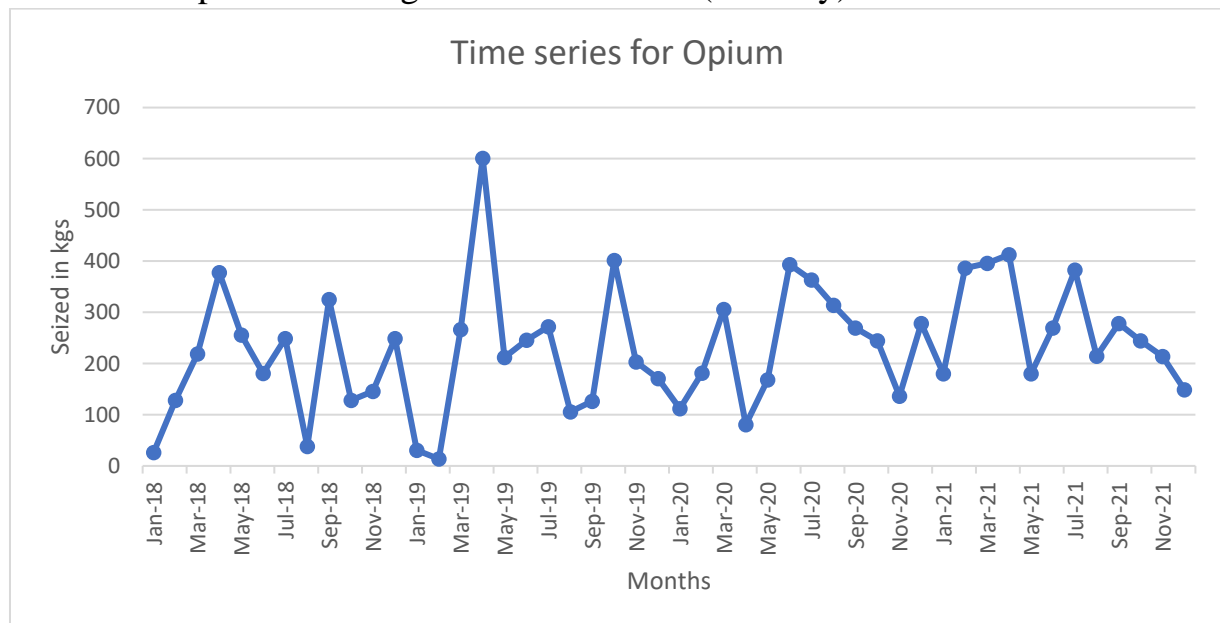
Note that each year the numbers of cases are less than the drug seizure in Kg. for total amount of drugs in Kg. And maximum cases are seeming to be register in 2020 for Opium.

### Time series:

Consider time series variables are as follows:

$X_t$ : Amount of Opium in kg. from (monthly) 2018-2021.

$Y_t$ : No. of Opium cases register in India from (monthly) 2018-2021.



Seizure of Opium in Kg.

This is the time series plot for seizure of opium in kg from the year 2018 to year 2020. Trend and seasonal pattern can be observed in the plot.

To estimate the observed trend and seasonal components and to forecast expected kg of drug to be seized in next 8 months, the Holt-winter seasonal algorithm has been used. By using given formulas,

### Holt-Winters' additive method

The component form for the additive method is:

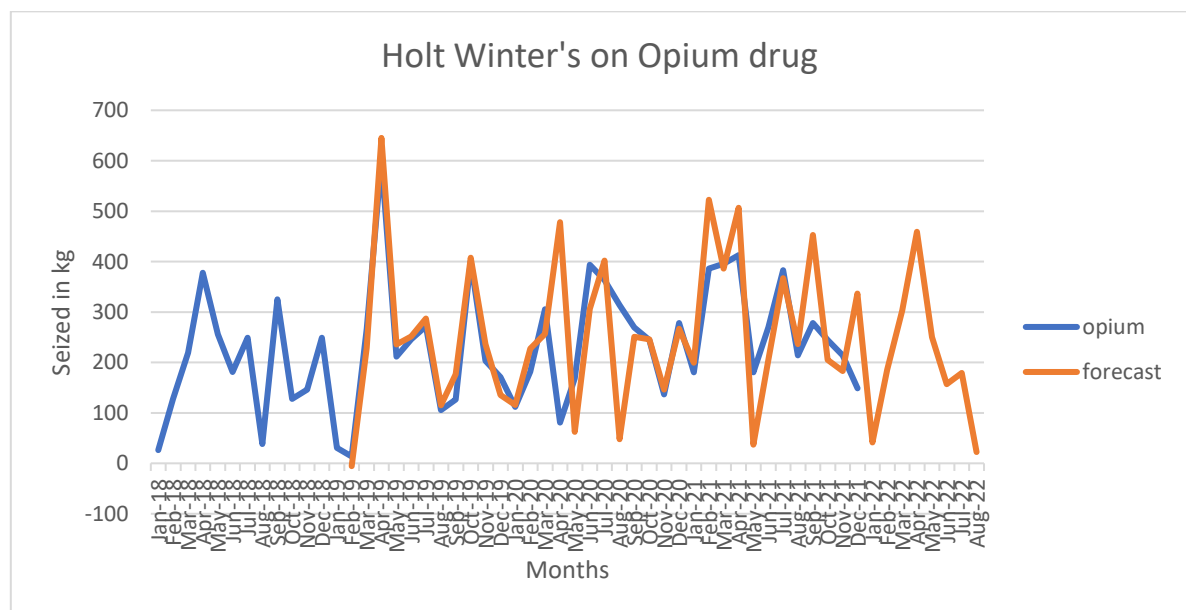
$$\hat{y}_{t+h|t} = \ell_t + hb_t + s_{t+h-m(k+1)}$$

$$\text{Level} = \alpha(y_t - s_{t-m}) + (1-\alpha)(\ell_{t-1} + b_{t-1})$$

$$\text{Trend} = \beta(\ell_t - \ell_{t-1}) + (1-\beta)b_{t-1}$$

$$\text{seasonal} = \gamma(y_t - \ell_{t-1} - b_{t-1}) + (1-\gamma)s_{t-m},$$

here  $\ell_t$  is level,  $b_t$  is for trend and  $s_t$  is for seasonality,  $m$  is time periods



Trend Analysis and Forecasting for Opium

From the Holt-Winter algorithm we can see that the RMSE is 124.603. Thus, the we found the good fit of the data. We have forecasted 8 observations. Note that in the forecast it showing expected decreasing trend in the data.



## ► Ljung Box

The Ljung-Box and Box-Pierce tests are methods that test for the absence of autocorrelation in residuals.

```
import pandas as pd
data=pd.read_excel("opium.xlsx",index_col=0)
data
from statsmodels.stats.diagnostic import acorr_ljungbox
```

```
a=acorr_ljungbox(data, lags=[1], return_df=True)
print(a)
print("we see a p-value much greater than 0.05, thus we do not reject our the null hypothesis ,"
```

```
      "indicating the time series does not contain an autocorrelation.")
```

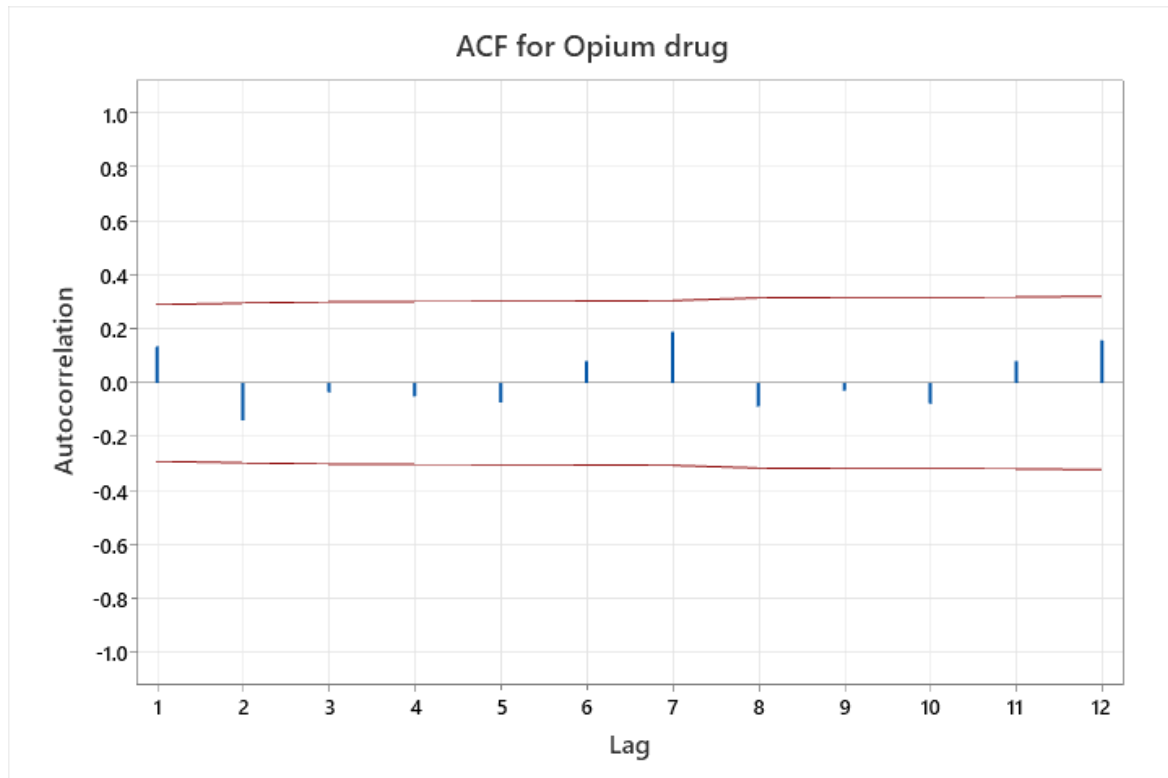
```
lb_stat  lb_pvalue
1  0.928872  0.335156
```

```
we see a p-value much greater than 0.05, thus we do not reject our the null hypothesis ,indicating th
e time series does not contain an autocorrelation.
```

## • ACF Plot of Residuals

### Autocorrelations

Lag	ACF	T	LBQ
1	0.134872	0.93	0.93
2	-0.138936	-0.95	1.94
3	-0.034435	-0.23	2.00
4	-0.049015	-0.33	2.13
5	-0.073022	-0.49	2.43
6	0.080970	0.54	2.80
7	0.189878	1.25	4.91
8	-0.087698	-0.56	5.37
9	-0.028068	-0.18	5.42
10	-0.076111	-0.48	5.79
11	0.081566	0.51	6.22
12	0.157373	0.99	7.87



ACF Plot of Residuals for Opium

**Conclusion from ACF and PACF plots of residuals:** As all ACF values of residuals lies within a horizontal band which indicates that residuals form a white noise.

## Heroin

Heroin is an opioid drug made from morphine, a natural substance taken from the seed pod of the various opium poppy plants grown in Southeast and Southwest Asia, Mexico, and Colombia. Heroin can be a white or brown powder, or a black sticky substance known as black tar heroin. Other common names for heroin include big H, horse, hell dust, and smack.



Heroin Sample

\*Heroin image

[ <https://www.aftenposten.no/norge/i/wPe2n/f;ere-roeyker-blandingsforbruket-oeker-ogprosene-paa-heroin-synker>]

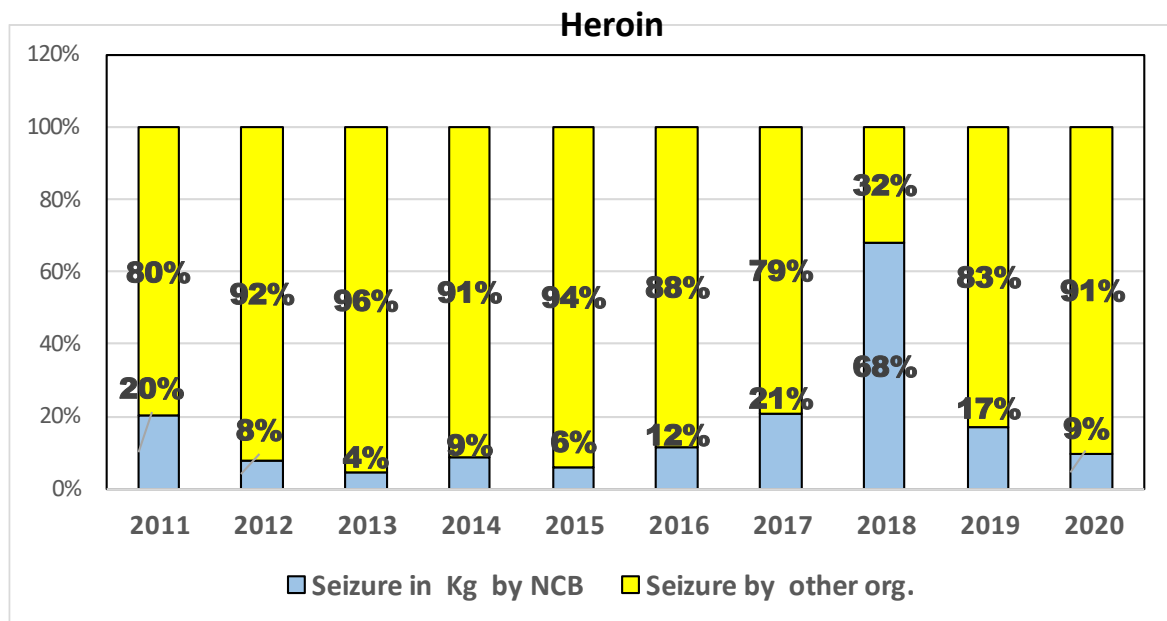
### Seizure of Heroin in Kg. for years 2011-2020

SR.	Year	Seizure By NCB in Kg.	Seizure by Other Orgs in Kg.	Seizure in India in Kg.	Cases in India
Heroin					
1	2011	68	460	528	2944
2	2012	265	768	1033	3155
3	2013	303	1147	1450	4609
4	2014	356	1015	1371	4467
5	2015	198	1218	1416	3931
6	2016	163	1512	1675	4565
7	2017	1247	899	2146	7069
8	2018	300	921	1258	7748
9	2019	137	2321	3231	10841
10	2020	343	3292	3838	9122
Total		3380	13553	17946	58451

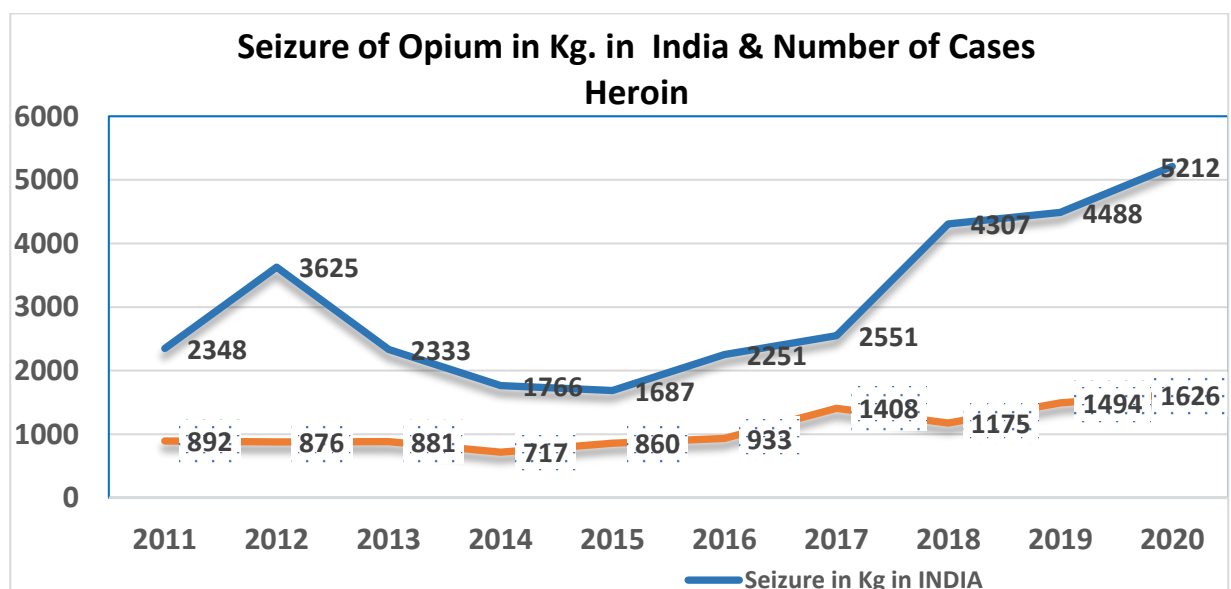
In the above table, year wise seizure of Heroin by NCB as well as by other organizations are given and the corresponding cases registered in India are also given. Note that there is one more column in the table ‘Seizure in India in Kg.’, it is the total of the columns ‘Seizure by NCB in Kg.’ and ‘Seizure by other organizations in Kg.’.

## Exploratory Data Analysis

### Drugs Seizure by NCB and Other organisation



Here from the above plot that the seizure of Heroin in Kg. by other organizations is larger than the NCB. And maximum quantity of Heroin is seizure in 2017.



**Figure 4.11: Seizure of Heroin in Kg. and Number of Cases Registered**

Note that each year the numbers of cases are more than the seizure of Heroin in Kg. for total amount of Heroin in Kg. And maximum cases are seems to be register in 2020 for Heroin.

## Time series:

Consider time series variables are as follows:

$X_t$ : Amount of Heroin in kg. from (monthly) 2018-2021.

$Y_t$ : Seizure of drug (kg) in India from (monthly) 2018-2021.

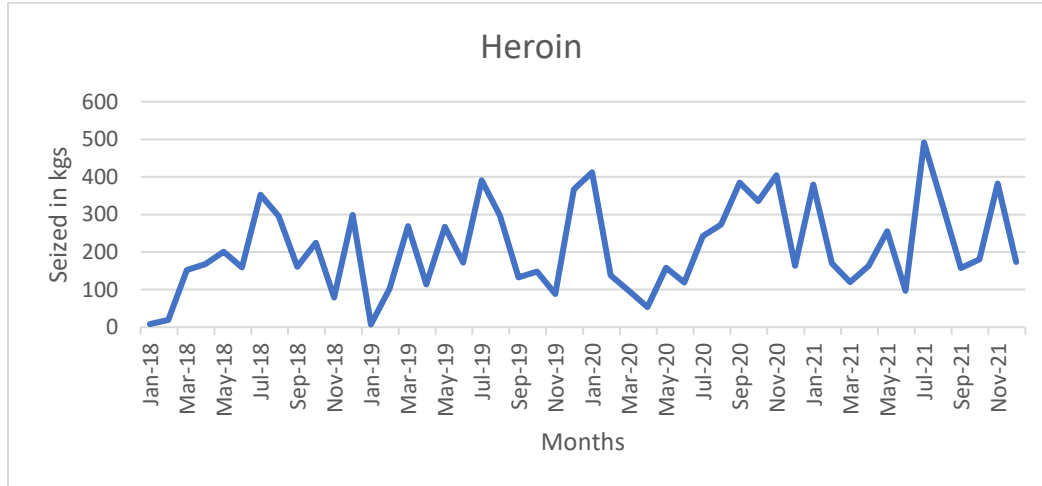
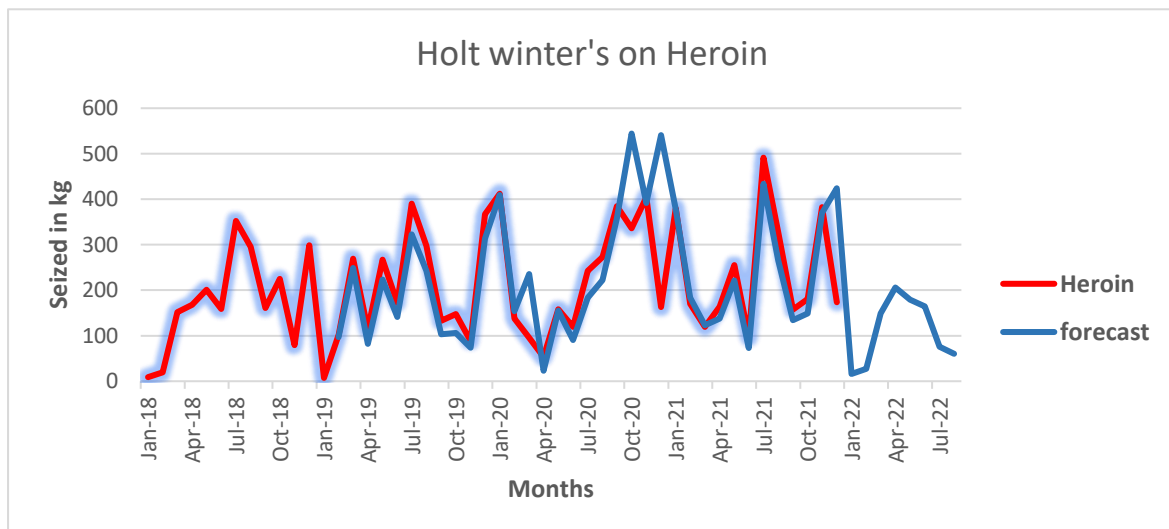


Figure 4.12: Time Series Plot of Seizure of Heroin in Kg.

This is the time series plot for seizure of Heroin in kg from the year 2018 to year 2021. Trend and seasonal pattern can be observed in the plot.

To estimate the observed trend and seasonal components and to forecast expected kg of drug to be seized in next 8 months, the Holt-winter seasonal algorithm has been used



From the Holt-Winter algorithm we can see that the RMSE is 154.3146. Thus, we found the good fit of the data. We have forecasted 8 observations. Note that in the forecast it is showing an expected decreasing trend in the data.

- **Ljung Box**

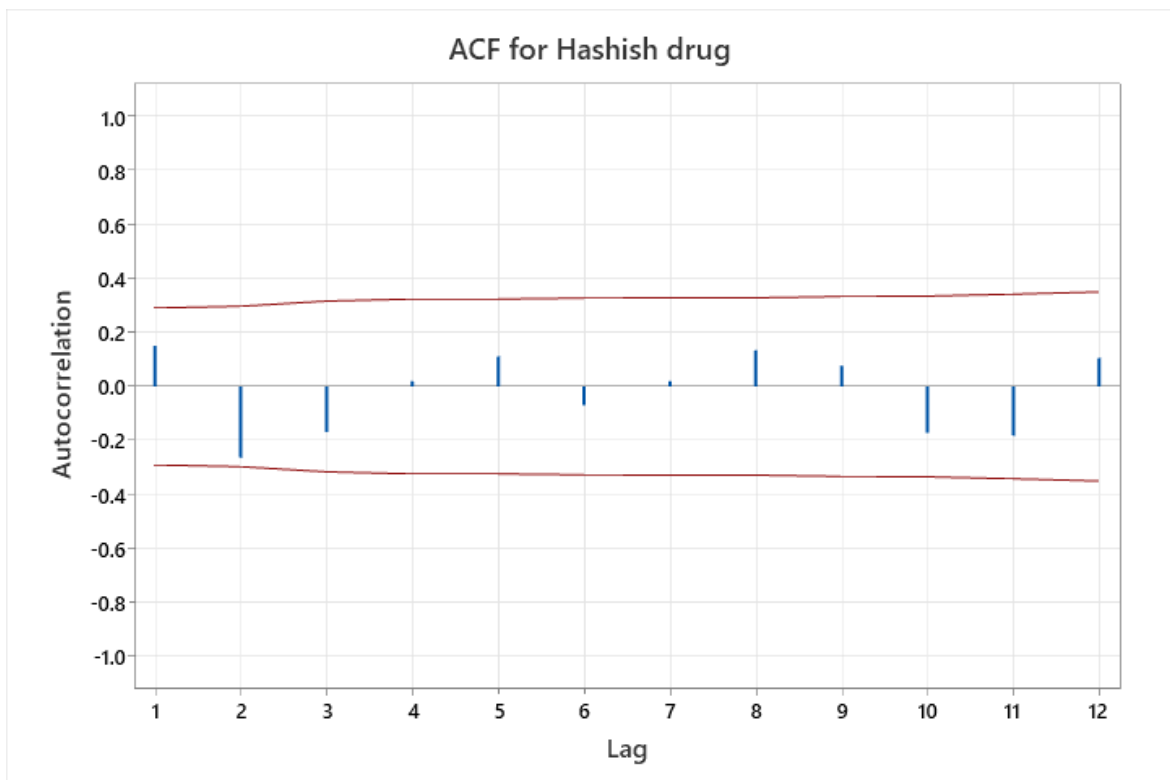
The Ljung-Box and Box-Pierce tests are methods that test for the absence of autocorrelation in residuals.

```
import pandas as pd
data=pd.read_excel("heroin.xlsx",index_col=0)
data
from statsmodels.stats.diagnostic import acorr_ljungbox

a=acorr_ljungbox(data, lags=[1], return_df=True)
print(a)
print("we see a p-value much greater than 0.05, thus we do not reject our the null hypothesis ,"
```

```
lb_stat lb_pvalue
1 0.981332 0.32187
we see a p-value much greater than 0.05, thus we do not reject our the null hypothesis ,indicating th
e time series does not contain an autocorrelation.
```

- **ACF Plot of residuals**



ACF Plot of Residuals for Heroin

**Conclusion from ACF and PACF plots of residuals:** As all ACF values of residuals lies within a horizontal band which indicates that residuals form a white noise.

## Ganja

Cannabis is an herbal drug that is made from the Cannabis plant. It contains chemicals called cannabinoids. Cannabinoids are found in the highest levels in the leaves and flowers of cannabis. These are the parts of the herb that are used to make medicine.



Ganja (Cannabis) Leaves

\*Ganja image

[<https://www.pexels.com/photo/person-holding-green-cannabis-2178565/>]

### Seizure Data of Ganja in 2011-2020

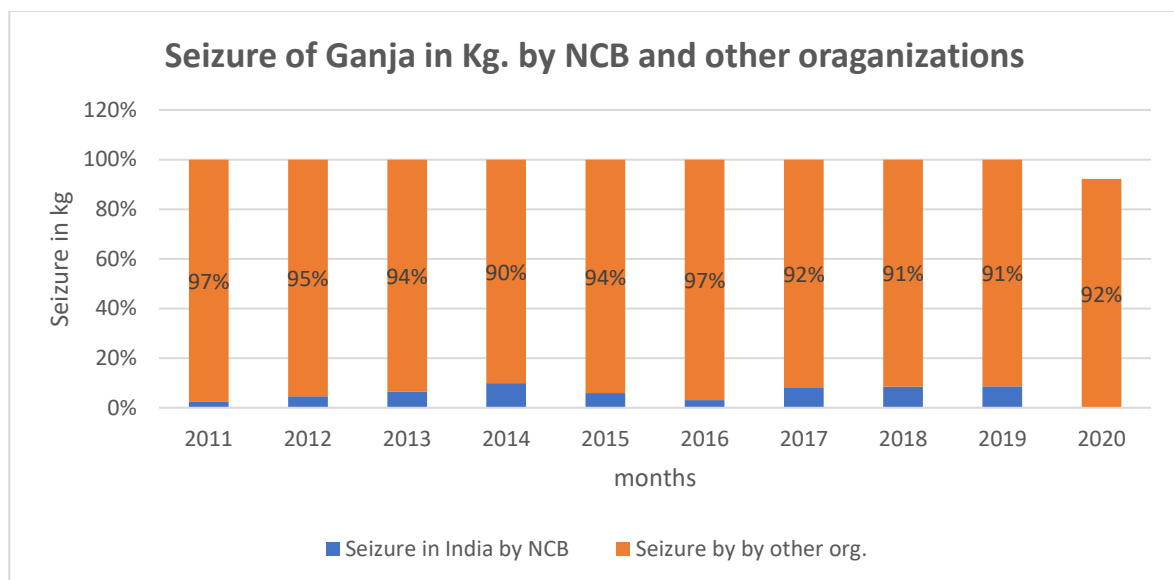
SR.	Year	Seizure By NCB in Kg.	Seizure by Other Orgs in Kg.	Seizure in India in Kg.	Cases in India
<b>Cannabis (Ganja)</b>					
1	2011	3124	119587	122711	4174
2	2012	3622	73527	77149	4468
3	2013	5889	85903	91792	4592
4	2014	10784	97516	108300	5510
5	2015	5612	88791	94403	8130
6	2016	8934	285413	294347	14401
7	2017	28934	323445	352379	21432

8	2018	29528	317196	391275	22477
9	2019	26312	279976	342045	27234
10	2020	42422	501056	581644	27281
	Total	165161	2172410	2456045	139699

In the above table, year wise seizure of Ganja by NCB as well as by other organizations are given and the corresponding cases registered in India are also given.

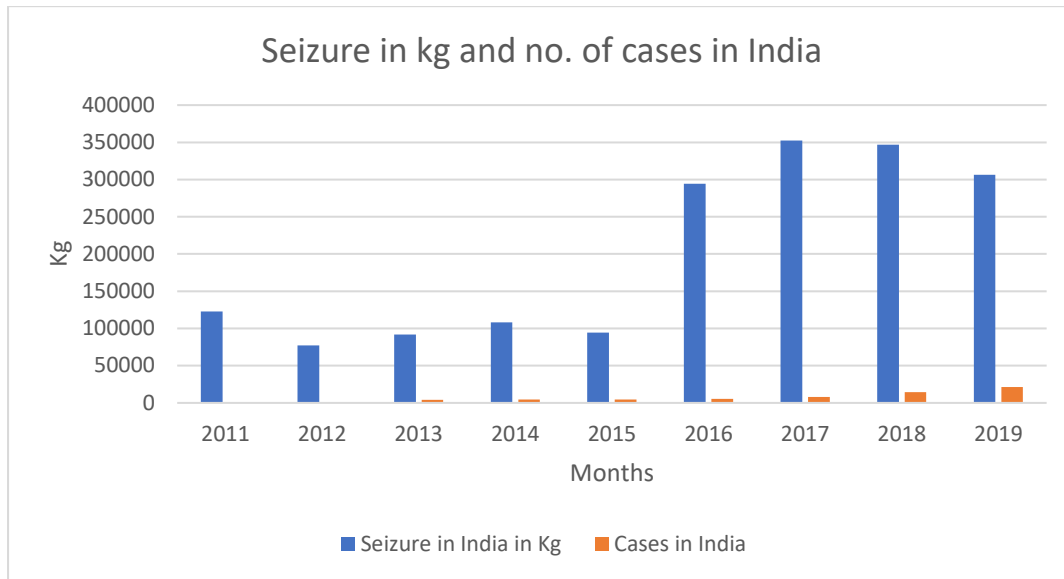
Note that there is one more column in the table 'Seizure in India in Kg.', it is the total of the columns 'Seizure by NCB in Kg.' and 'Seizure by other organizations in Kg.'.

## Exploratory Data Analysis



Here from the above plot that the seizure of Ganja in Kg. by other organizations is larger than the NCB. And maximum quantity of Ganja is seizure in 2011 & 2016 by other organisation.





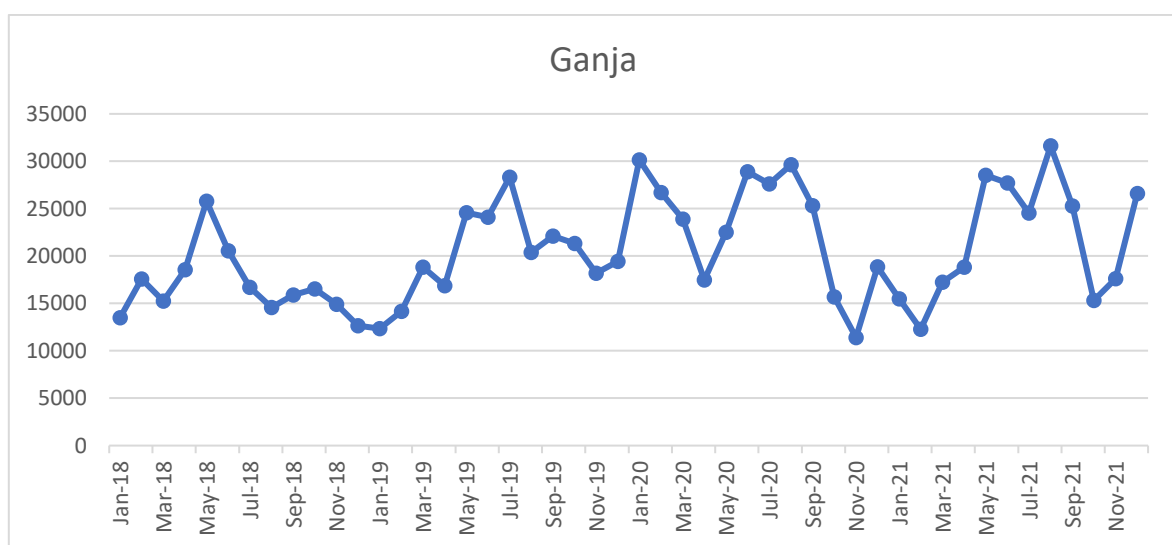
Note that each year the numbers of cases are less than the seizure of Ganja in Kg. for total amount of Ganja in Kg. And maximum cases are seems to be register in 2017 for Ganja.

## Timeseries:

Consider the time series variables as follows:

$X_t$ : Amount of Ganja in kg. from (monthly) 2018-2020

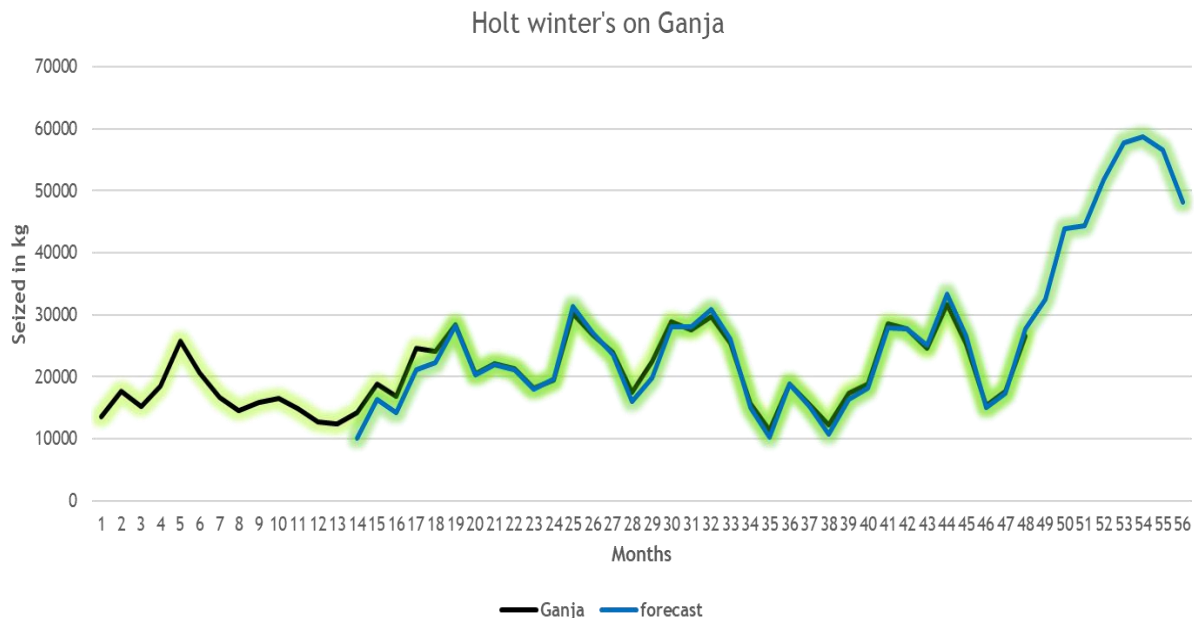
$Y_t$ : No. of Ganja cases register in India from (monthly) 2018-2021.



Time Series Plot of Seizure of Ganja in Kg.

This is the time series plot for seizure of ganja in kg from the year 2018 to year 2021. Trend and seasonal pattern can be observed in the plot.

To estimate the observed trend and seasonal components and to forecast expected kg of drug to be seized in next 8 months, the Holt-winter seasonal algorithm has been used.



#### Trend Analysis and Forecasting for Ganja

From the Holt-Winter algorithm we can see that the RMSE is 140.581 . Thus, the we found the good fit of the data. We have forecasted 8 observations. Note that in the forecast it showing expected decreasing trend in the data.

- **Ljung Box**
- The Ljung-Box and Box-Pierce tests are methods that test for the absence of autocorrelation in residuals.

```
import pandas as pd
data=pd.read_excel("opium.xlsx",index_col=0)
data
from statsmodels.stats.diagnostic import acorr_ljungbox

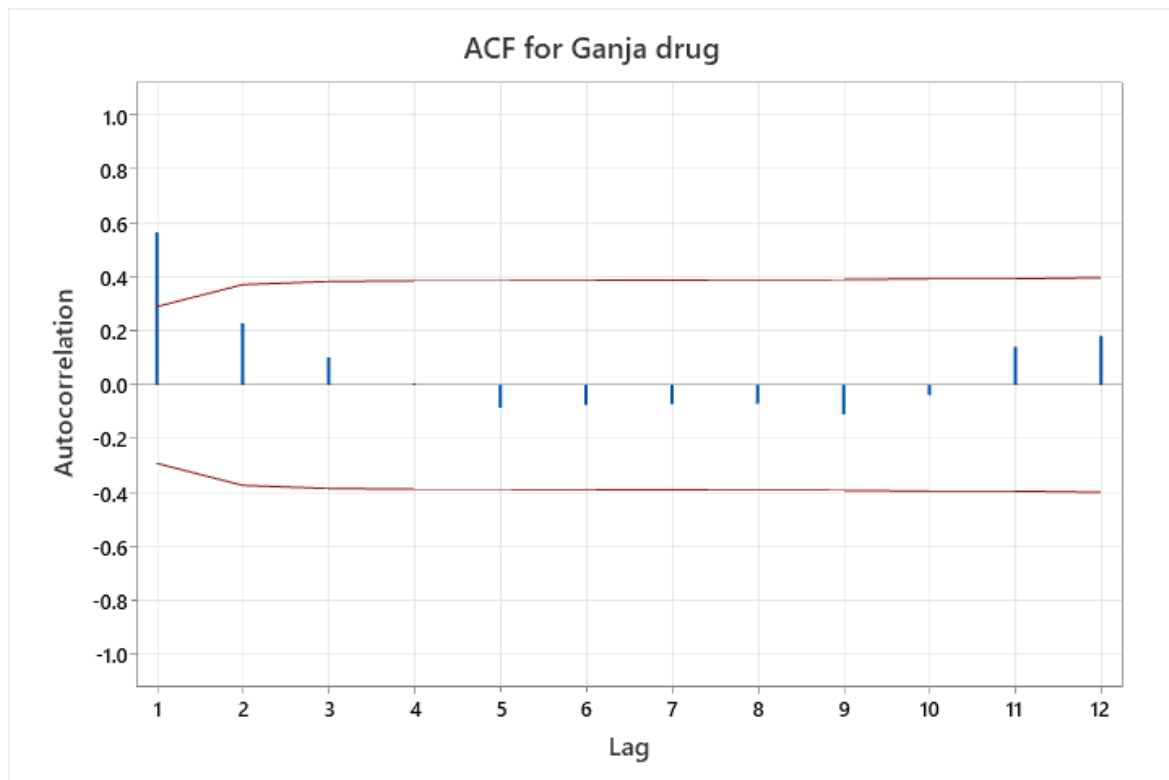
a=acorr_ljungbox(data, lags=[1], return_df=True)
print(a)
print("we see a p-value much smaller than 0.05, thus we reject our the null hypothesis ,"
```

```
      lb_stat  lb_pvalue
1  16.376061  0.000052
we see a p-value much smaller than 0.05, thus we reject our the null hypothesis ,indicating the time
series does contain an autocorrelation.
```

### • ACF Plot from residuals

#### Autocorrelations

Lag	ACF	T	LBQ
1	0.566302	3.92	16.38
2	0.228369	1.23	19.10
3	0.101864	0.53	19.65
4	0.005908	0.03	19.65
5	-0.084737	-0.44	20.05
6	-0.074204	-0.39	20.37
7	-0.070854	-0.37	20.66
8	-0.069066	-0.36	20.95
9	-0.108999	-0.56	21.68
10	-0.036923	-0.19	21.77
11	0.140913	0.72	23.05
12	0.182381	0.92	25.27



ACF Plot of Residuals for Ganja

**Conclusion from ACF plots of residuals:** As all ACF values of residuals lies within a horizontal band which indicates that residuals form a white noise.

## Hashish

**Charas** is the name given to a hashish form of cannabis which is handmade in the Indian subcontinent . It is a cannabis concentrate made from the resin of the cannabis plant(*Cannabis sativa* or *Cannabis indica*).The plant grows wild throughout Northern India along the stretch of the Himalayas (its putative origin) and is an important cash crop for the local people.



The difference between charas and hashish is that hashish is made from a dead cannabis plant and charas is made from a live one.

\*Hashish images

[\[https://stock.adobe.com/search?k=hashish\]](https://stock.adobe.com/search?k=hashish)

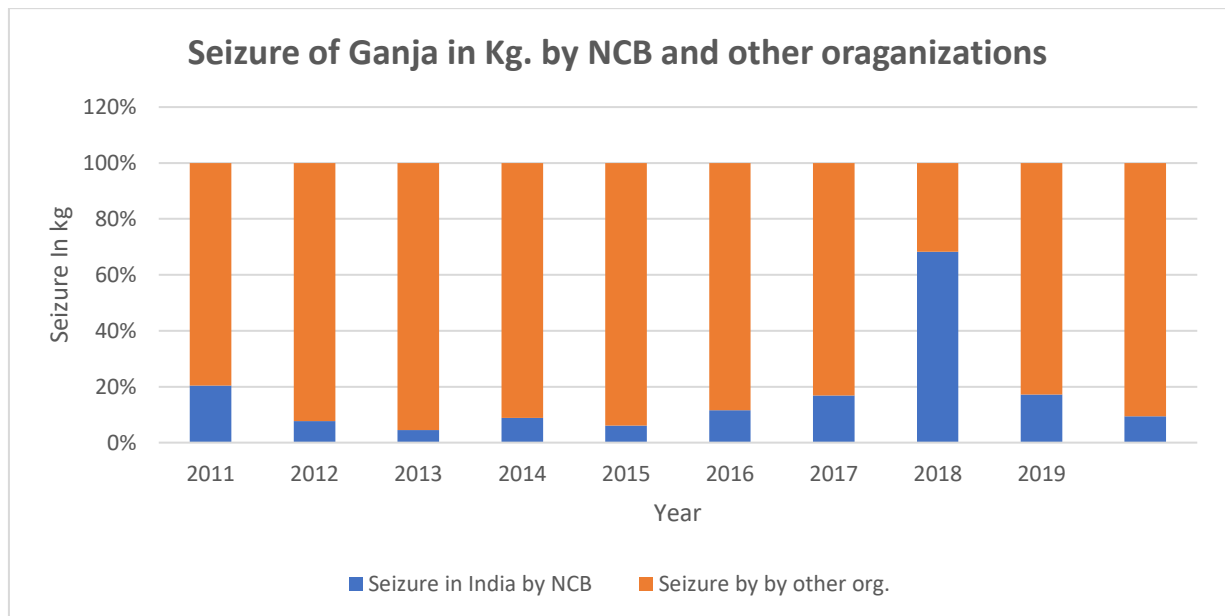
### Seizure Data of Hashish in 2011-2020

SR.	Year	Seizure By NCB in Kg.	Seizure by Other Orgs in Kg.	Seizure in India in Kg.	Cases in India
Hashish					
1	2011	791	3081	3872	2263
2	2012	262	3123	3385	2031
3	2013	197	4210	4407	2430
4	2014	201	2079	2280	2247
5	2015	204	3145	3349	2295
6	2016	324	2481	2805	2567
7	2017	541	2677	3218	2943
8	2018	6400	2976	3911	3089
9	2019	563	2702	3572	3316
10	2020	615	5909	6643	3112

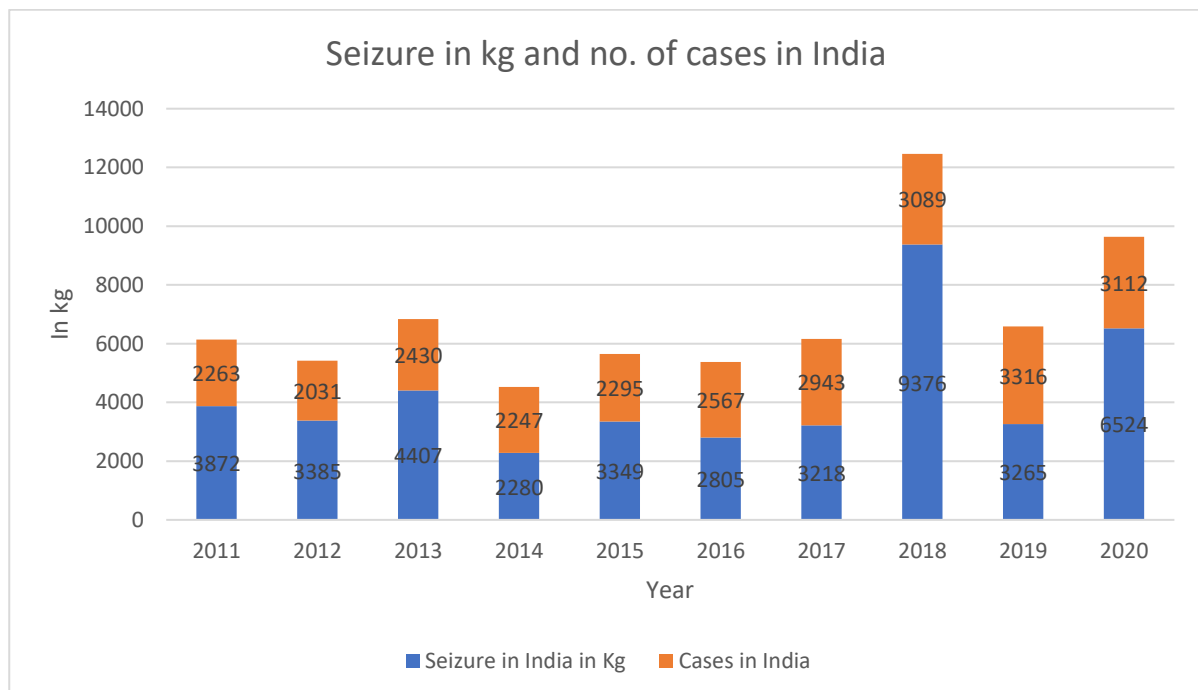
In the above table, year wise seizure of Hashish by NCB as well as by other organizations are given and the corresponding cases registered in India are also given. Note that there is one more column in the table ‘Seizure in India in Kg.’,

it is the total of the columns 'Seizure by NCB in Kg.' and 'Seizure by other organizations in Kg.'.

## Exploratory Data Analysis



Here from the above plot that the seizure of Hashish in Kg. by other organizations is larger than the NCB. And maximum quantity of Hashish is seizure in 2013 and NCB during 2018.



### Seizure of Hashish in India and Number of Cases

Note that each year the numbers of cases are more than the seizure of Hashish in Kg. And maximum cases are seems to be register in 2018 for Hashish.

### Timeseries :

Consider the time series variable under consideration as follows:

$X_t$ : Amount of Hashish in kg. from (monthly) 2018-2021

$Y_t$ : No. of Hashish cases register in India from (monthly) 2018-2021.

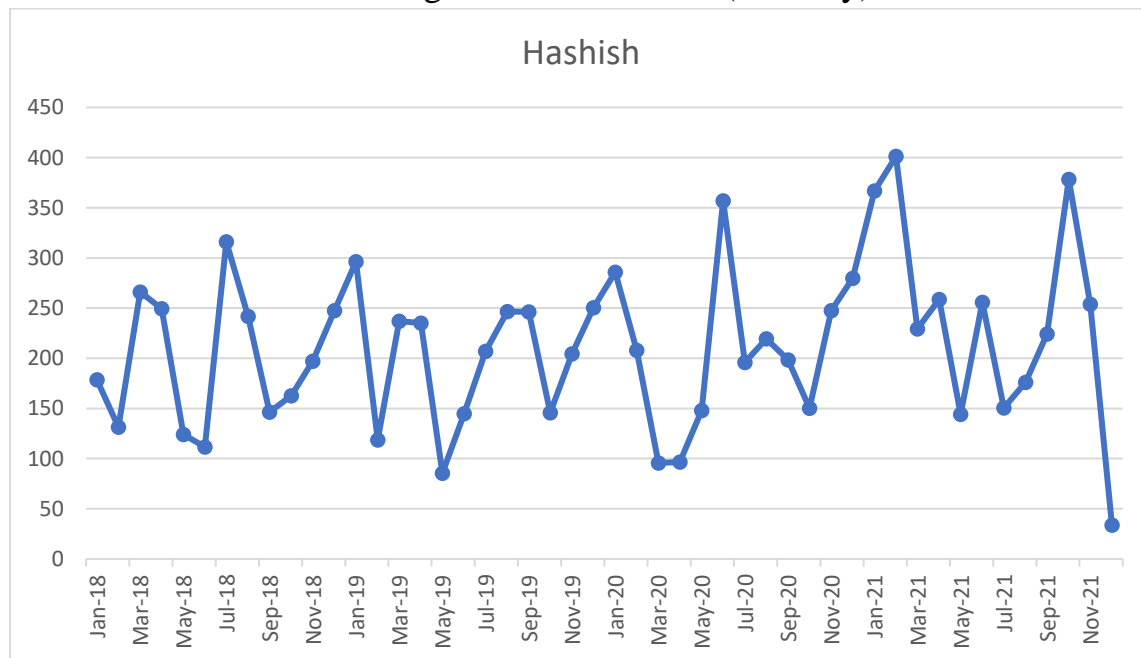
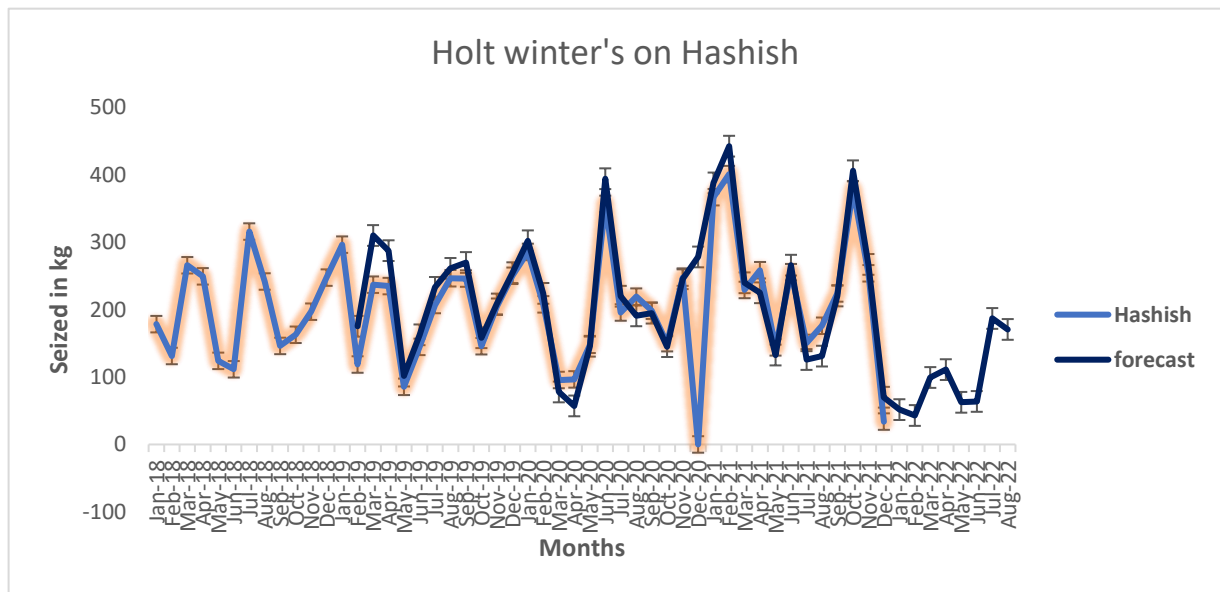


Figure 4.30: Time Series Plot of Seizure of Hashish in Kg.

This is the time series plot for seizure of Hashish in kg. from monthly 2018-2021. Trend and seasonal pattern can be observed in the plot.

To estimate the observed trend and seasonal components and to forecast expected kg of drug to be seized in next 8 months, the Holt-winter seasonal algorithm has been used.



Trend Analysis and Forecasting for

From the Holt-Winter algorithm we can see that the RMSE is 57.9602. Thus, we found the good fit of the data. We have forecasted 8 observations. Note that in the forecast it is showing an expected decreasing trend in the data.

### • Ljung Box:

The Ljung-Box and Box-Pierce tests are methods that test for the absence of autocorrelation in residuals.

```
import pandas as pd
data=pd.read_excel("heroin.xlsx",index_col=0)
data
from statsmodels.stats.diagnostic import acorr_ljungbox
```

```
a=acorr_ljungbox(data, lags=[1], return_df=True)
print(a)
print("we see a p-value much greater than 0.05, thus we do not reject our the null hypothesis ,"
```

```
lb_stat lb_pvalue
1 0.981332 0.32187
```

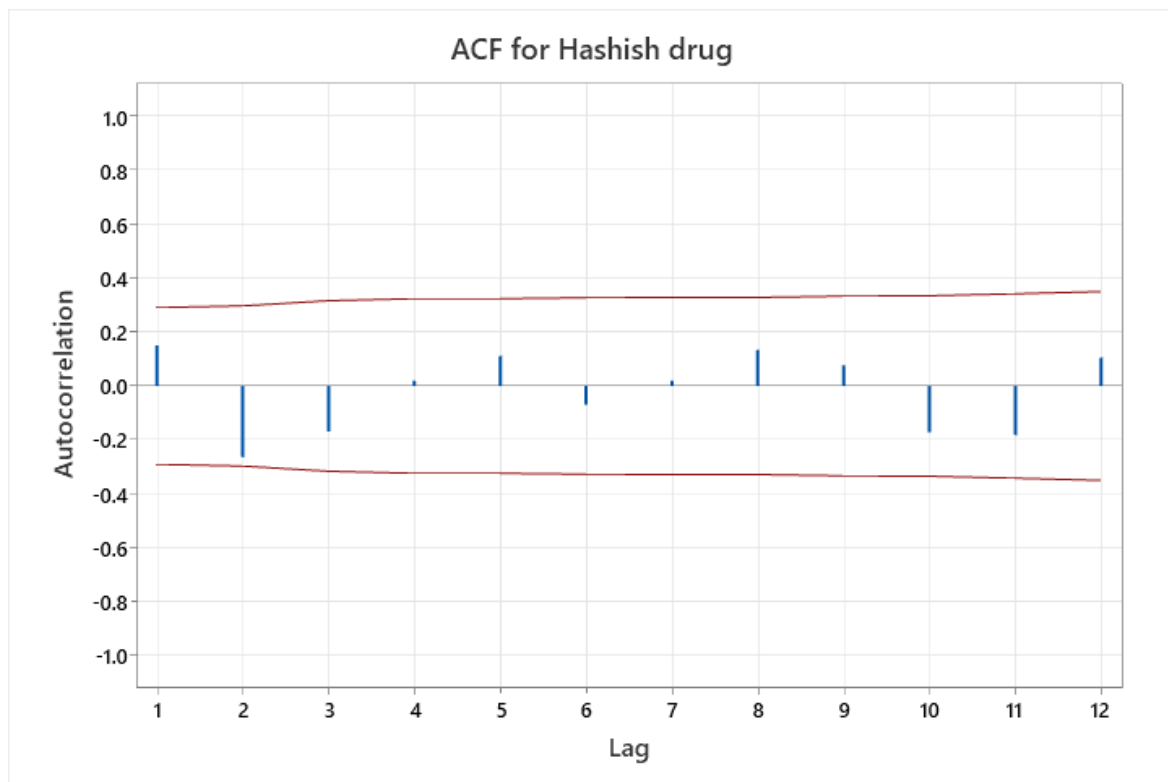
```
we see a p-value much greater than 0.05, thus we do not reject our the null hypothesis ,indicating th
e time series does not contain an autocorrelation.
```



• **ACF Plot of Residuals**

**Autocorrelations**

Lag	ACF	T	LBQ
1	0.149786	1.04	1.15
2	-0.263816	-1.79	4.78
3	-0.169052	-1.08	6.30
4	0.019079	0.12	6.32
5	0.112128	0.70	7.02
6	-0.069719	-0.43	7.30
7	0.020252	0.12	7.32
8	0.134392	0.82	8.41
9	0.077359	0.47	8.78
10	-0.171939	-1.03	10.64
11	-0.182486	-1.07	12.80
12	0.105160	0.60	13.54



## ACF Plot of Residuals for Hashish

**Conclusion from ACF plots of residuals:** As all ACF values of residuals lies within a horizontal band which indicates that residuals form a white noise.

## Cocaine

Cocaine is a highly addictive drug that ups your levels of alertness, attention, and energy. You may hear it called a stimulant.

It's made from the coca plant, which is native to South America. It's illegal in the U.S. Other names for it include:

- Coke
- Snow
- Rock
- Blow
- Crack



Cocaine Stones

It comes in a few different forms. The most common is a fine, white powder. It can also be made into a solid rock crystal.

Most cocaine users snort the white powder into their nose. Some rub it onto their gums or dissolve it in water and inject it with a needle. Others heat up the rock crystal and breathe the smoke into their lungs.

\*Cocaine image

[<https://www.outsidethebeltway.com/change-in-sentencing-crack-v-powder-cocaine/>]

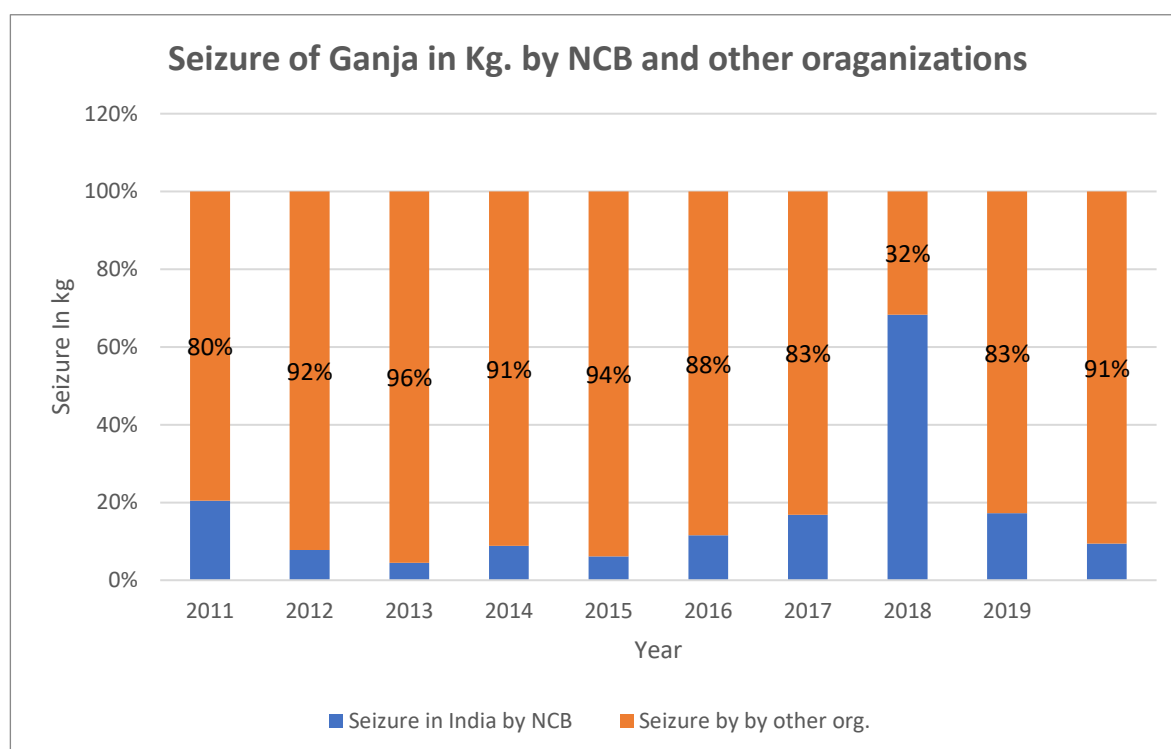
### Seizure Data of Cocaine in 2011-2020

SR.	Year	Seizure By NCB in Kg.	Seizure by Other Orgs in Kg.	Seizure in India in Kg.	Cases in India
Cocaine					
1	2011	1.14	12.86	14	80
2	2012	30	14	44	72
3	2013	21	26	47	78

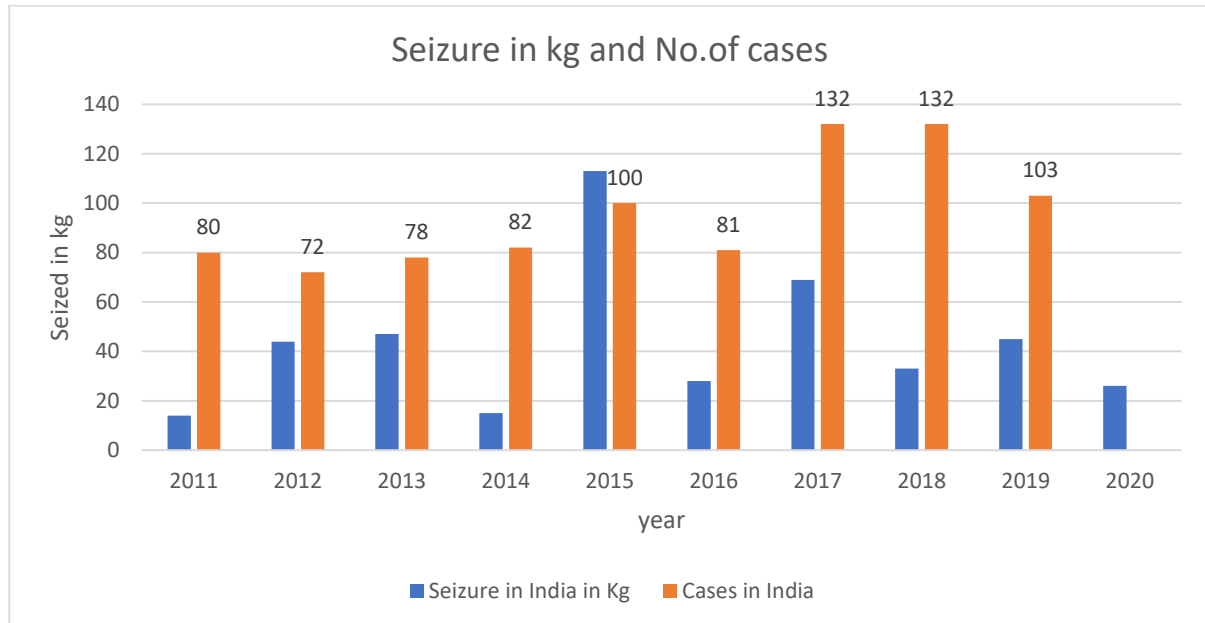
4	2014	3	12	15	82
5	2015	49	64	113	100
6	2016	12	16	28	81
7	2017	62	7	69	132
8	2018	26	7	69	132
9	2019	38	7	35	103
10	2020	4	22	66	134

In the above table, year wise seizure of Cocaine by NCB as well as by other organizations are given and the corresponding cases registered in India are also given. Note that there is one more column in the table ‘Seizure in India in Kg.’, it is the total of the columns ‘Seizure by NCB in Kg.’ and ‘Seizure by other organizations in Kg.’.

## Exploratory Data Analysis



Here from the above plot that the seizure of Cocaine in Kg. by other organizations is larger than the NCB. And maximum quantity of Cocaine is seizure in 2013 by other organisation.



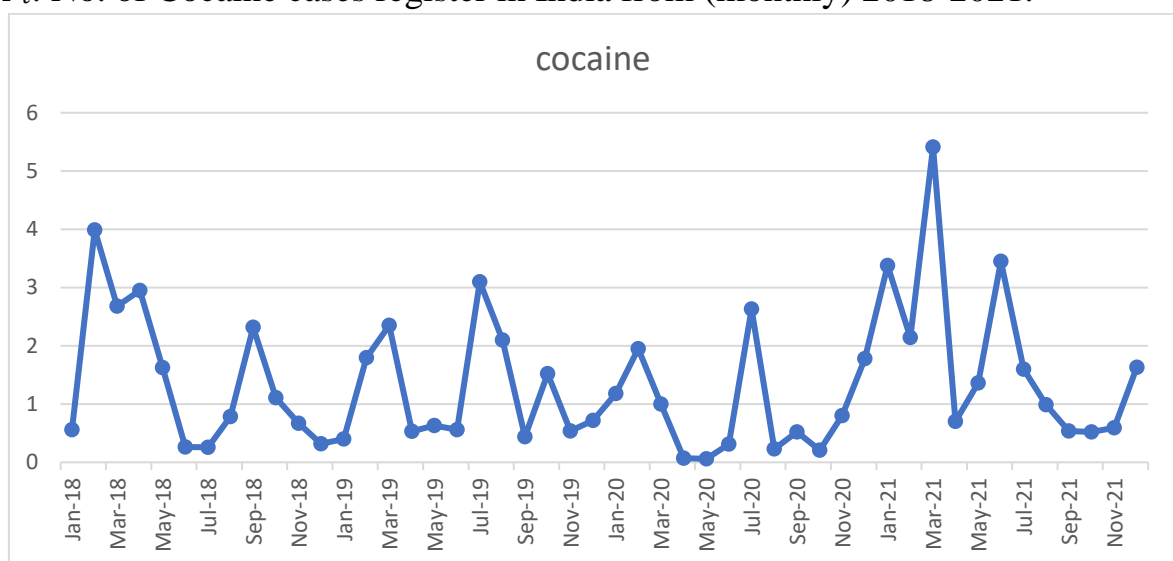
Seizure of Cocaine in India and Number of Cases

Note that each year the numbers of cases are more than the seizure of Cocaine in Kg. And maximum cases are seeming to be register in 2020 for Cocaine.

Consider time series variables are as follows:

$X_t$ : Amount of Cocaine in kg. from (monthly)2018-2021

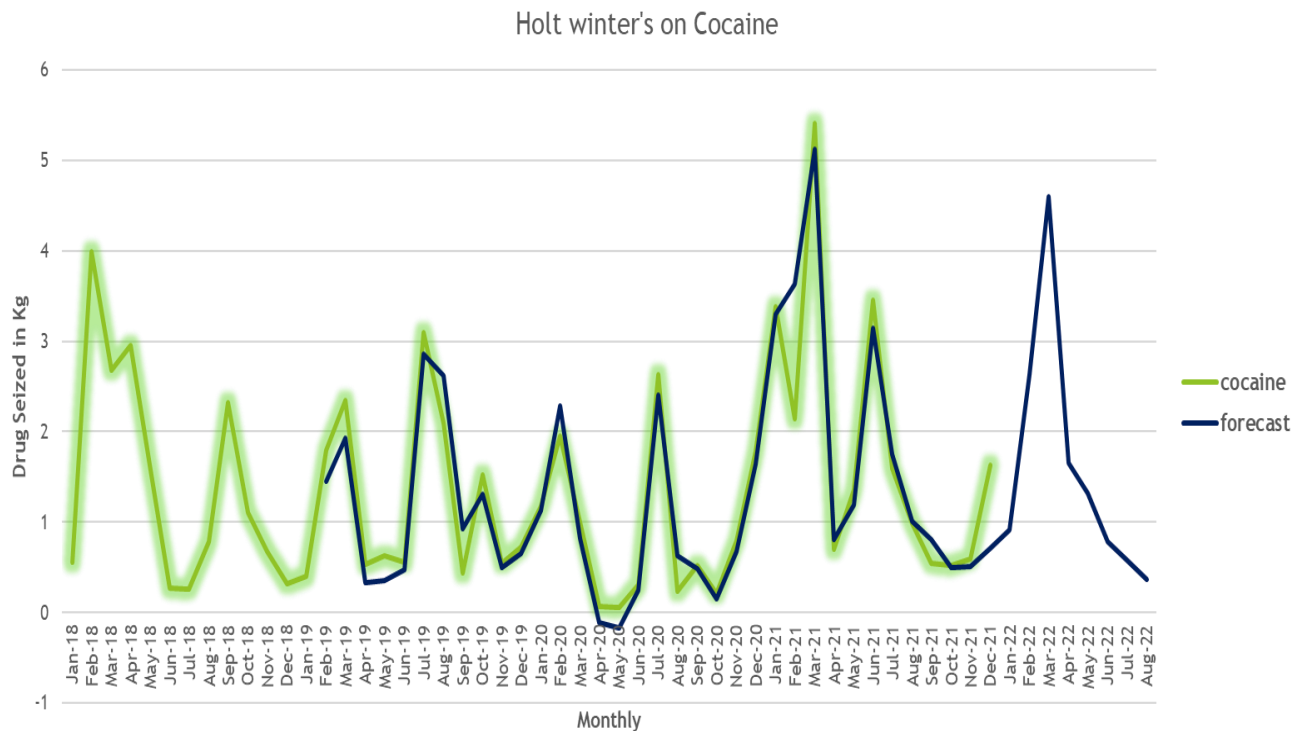
$Y_t$ : No. of Cocaine cases register in India from (monthly) 2018-2021.



### Time Series Plot of Seizure of Cocaine in Kg.

This is the time series plot for seizure of Cocaine in kg from the year 2018 to 2021. Trend and seasonal pattern can be observed in the plot.

To estimate the observed trend and seasonal components and to forecast expected kg of drug to be seized in next 8 observations, the Holt-winter seasonal algorithm has been used.



### Trend Analysis and Forecasting for Cocaine

From the Holt-Winter algorithm we can see that the RMSE is 95.7946. Thus, we found the good fit of the data. We have forecasted 8 observations. Note that in the forecast it is showing an expected decreasing trend in the data.

- **Ljung Box**

The Ljung-Box and Box-Pierce tests are methods that test for the absence of autocorrelation in residuals.

```
import pandas as pd
data=pd.read_excel("cocaine.xlsx",index_col=0)
data
from statsmodels.stats.diagnostic import acorr_ljungbox

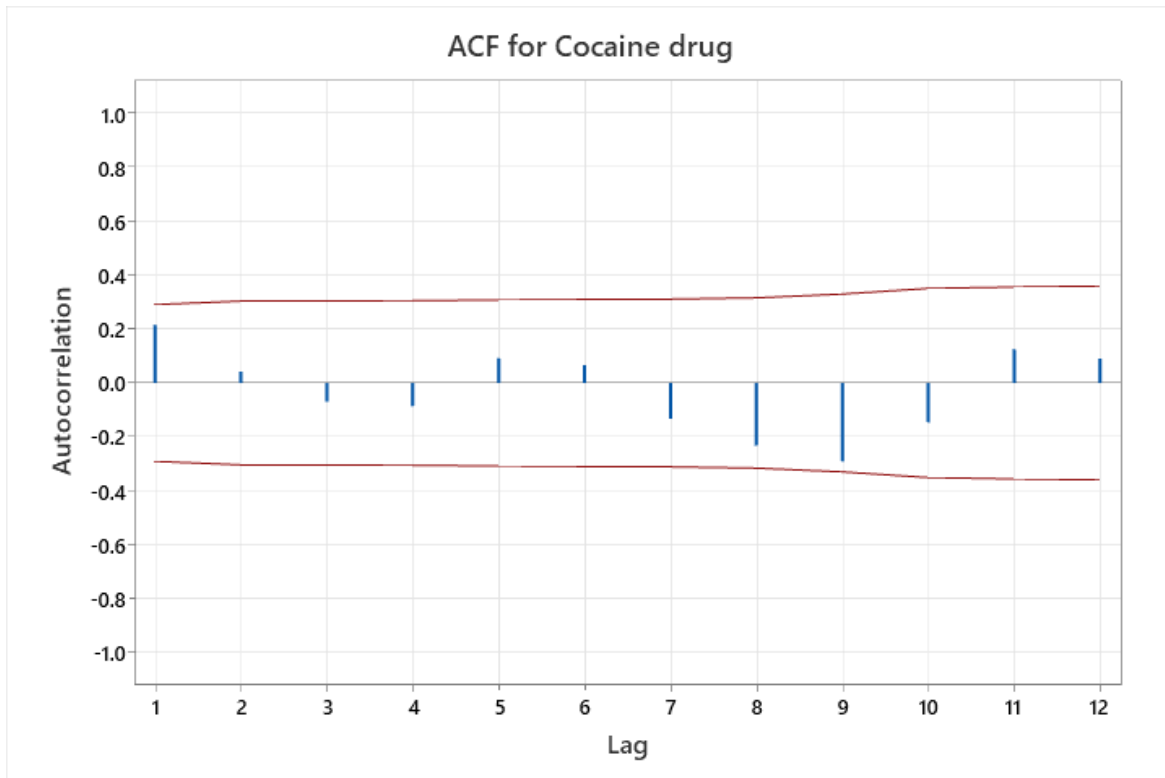
a=acorr_ljungbox(data, lags=[1], return_df=True)
print(a)
print("we see a p-value much greater than 0.05, thus we don't reject our the null hypothesis ,\"
      \"indicating the time series does not contain an autocorrelation.\")

      lb_stat  lb_pvalue
1  2.351761   0.125142
we see a p-value much greater than 0.05, thus we don't reject our the null hypothesis ,indicating the
time series does not contain an autocorrelation.
```

### • ACF Plot of residuals

#### Autocorrelations

Lag	ACF	T	LBQ
1	0.214605	1.49	2.35
2	0.042676	0.28	2.45
3	-0.069683	-0.46	2.71
4	-0.085069	-0.56	3.10
5	0.091450	0.60	3.57
6	0.065881	0.43	3.82
7	-0.132982	-0.86	4.85
8	-0.231261	-1.47	8.06
9	-0.291057	-1.78	13.27
10	-0.146177	-0.84	14.62
11	0.124545	0.70	15.63
12	0.089598	0.50	16.16



ACF Plot of Residuals for Cocaine

**Conclusion from ACF plots of residuals:** As all ACF values of residuals lies within a horizontal band which indicates that residuals forms a white noise.

## Ephedrine

Ephedrine is a central nervous system stimulant used to treat breathing problems (as bronchodilator), nasal congestion (as a decongestant), low blood pressure problems (orthostatic hypotension), or



myasthenia gravis. Ephedrine is also used to treat narcolepsy, menstrual problems (dysmenorrhea), or urine-

control problems. Ephedrine is available ephedrine tablets in generic form.

\*Ephedrine image

[<https://www.themix.org.uk/drink-and-drugs/drugs-a-z/ephedrine-9975.html>]

### Seizure Data of Ephedrine in 2011-2020

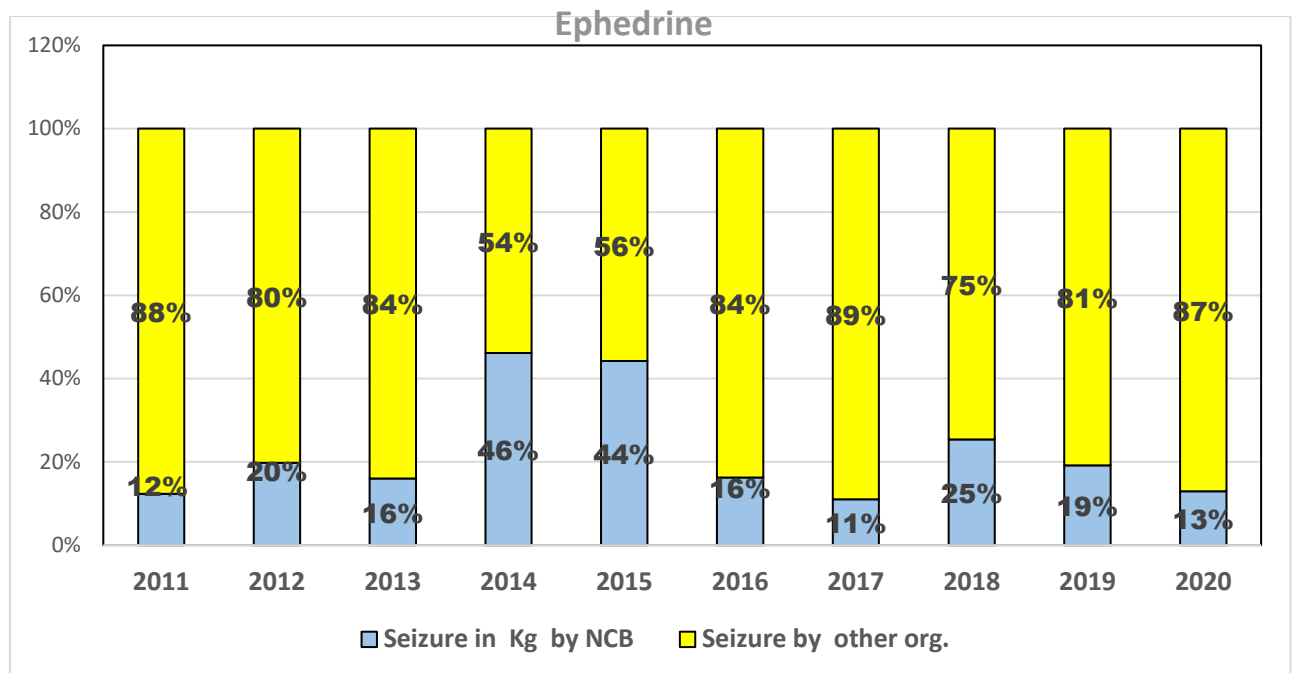
SR.	Year	Seizure By NC B in Kg.	Seizure by Other Orgs in Kg.	Seizure in India in Kg.	Cases in India
<b>Ephedrine</b>					
1	2011	131	7077	7208	20
2	2012	250	4143	4393	17
3	2013	1702	4953	6655	66
4	2014	536	794	1330	44
5	2015	134	693	827	19
6	2016	64	21209	21272	17
7	2017	464	1813	2990	26
8	2018	115	218	337	18
9	2019	281	405	686	27
10	2020	88	0	841	20

In the above table, year wise seizure of Ephedrine by NCB as well as by other organizations is given and the corresponding cases registered in India are also given. Note that there is one more column in the table 'Seizure in India in Kg. it is the total of the columns 'Seizure by NCB in Kg.' and 'Seizure by other organizations in Kg.'.

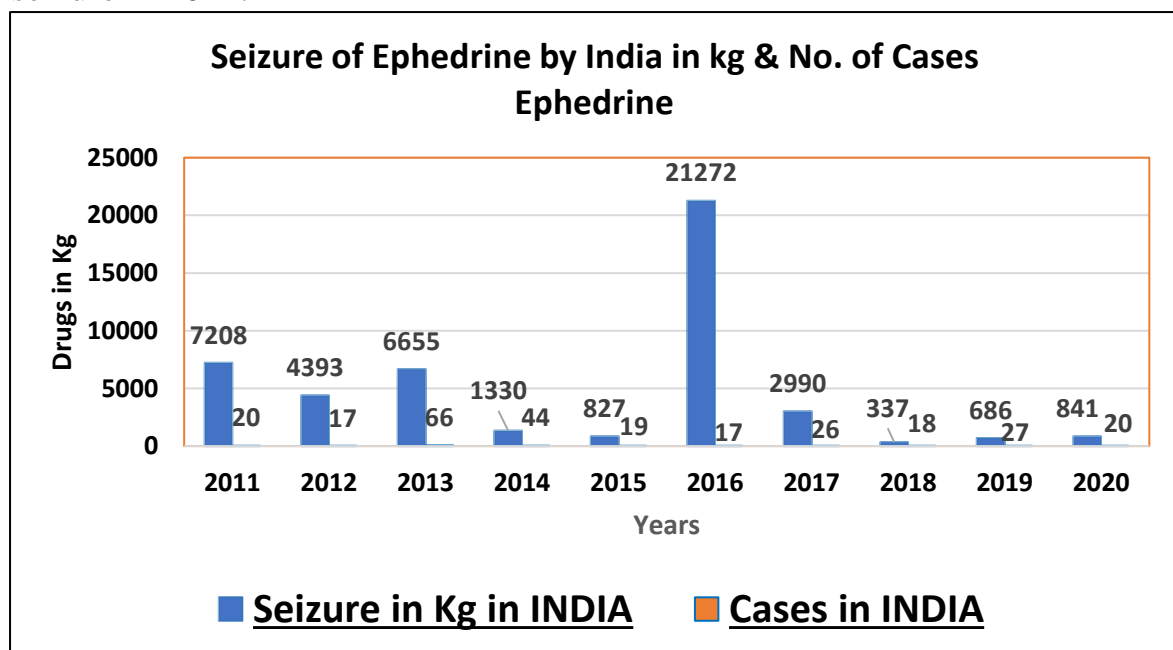


## Exploratory Data Analysis

### Drugs Seizure by NCB and Other organisation



Here from the above plot that the seizure of Ephedrine in Kg. by other organizations is larger than the NCB. And maximum quantity of Ephedrine is seizure in 2011.



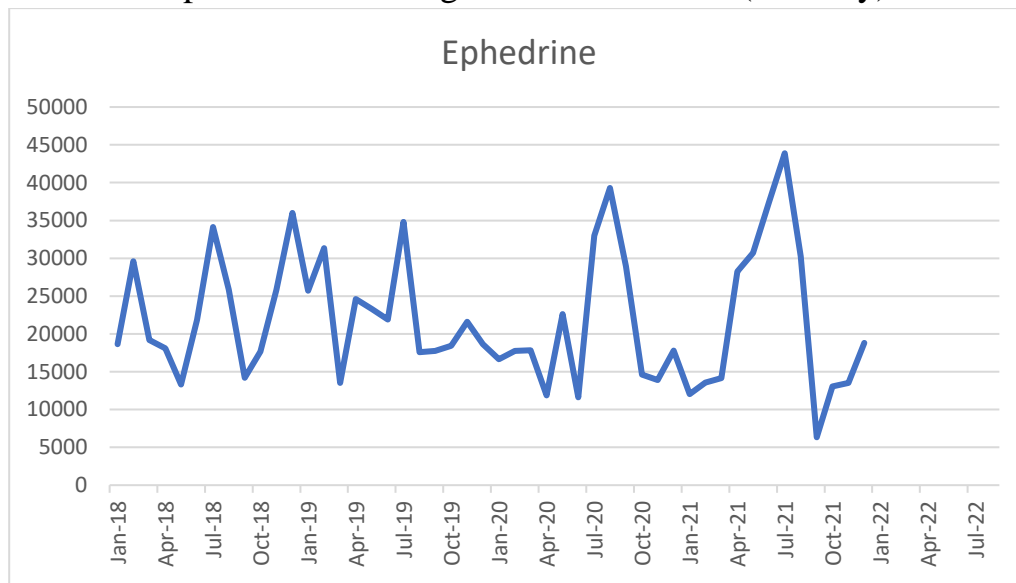
**Figure 4.44: Seizure of Ephedrine in India and Number of Cases**

Note that each year the numbers of cases are less than the seizure of Ephedrine in Kg. And maximum cases are seeming to be register in 2016 for Ephedrine.

Consider time series variables are as follows:

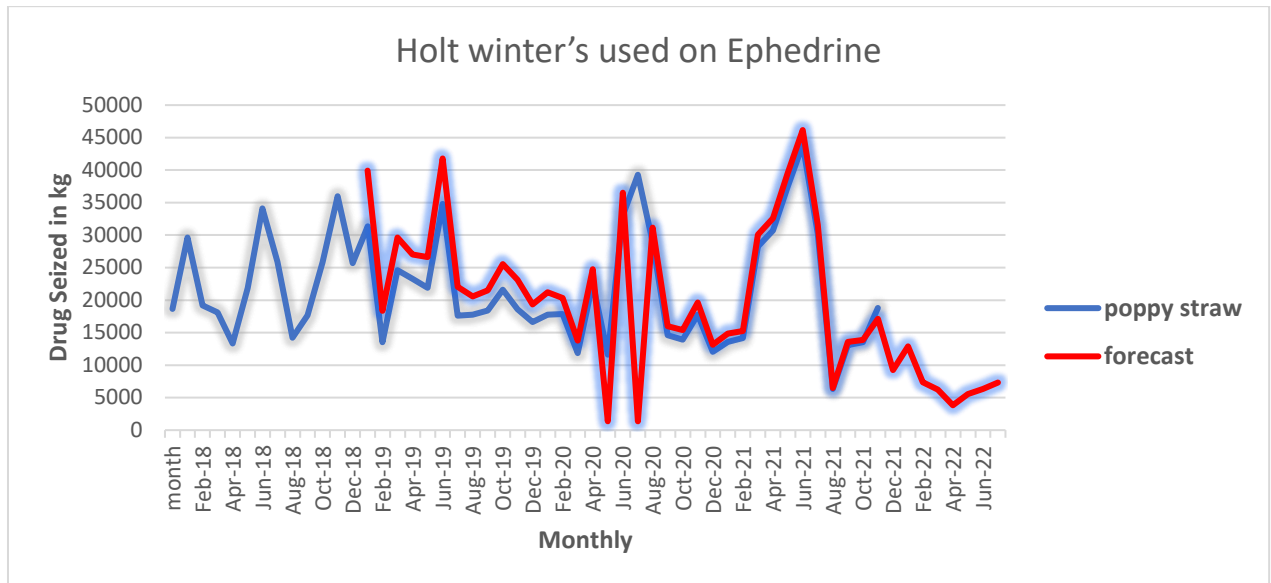
$X_t$ : Amount of Ephedrine in kg from (monthly) 2018-2021

$Y_t$ : No. of Ephedrine cases register in India from (monthly) 2018-2021

**Figure 4.45: Time Series Plot of Seizure of Ephedrine in Kg.**

This is the time series plot for seizure of Ephedrine in kg from the year 2018 to year 2021. Trend and seasonal pattern can be observed in the plot.

To estimate the observed trend and seasonal components and to forecast expected kg of drug to be seized in next 8 months, the Holt-winter seasonal algorithm has been used.



#### Trend Analysis and Forecasting for Ephedrine

From the Holt-Winter algorithm we can see that the RMSE is 78.9598. Thus, we found the good fit of the data. We have forecasted 8 observations. Note that in the forecast it is showing an expected decreasing trend in the data.

- **Ljung Box:-**

The Ljung-Box and Box-Pierce tests are methods that test for the absence of autocorrelation in residuals.

```
import pandas as pd
data=pd.read_excel("poppy straw.xlsx",index_col=0)
data
from statsmodels.stats.diagnostic import acorr_ljungbox

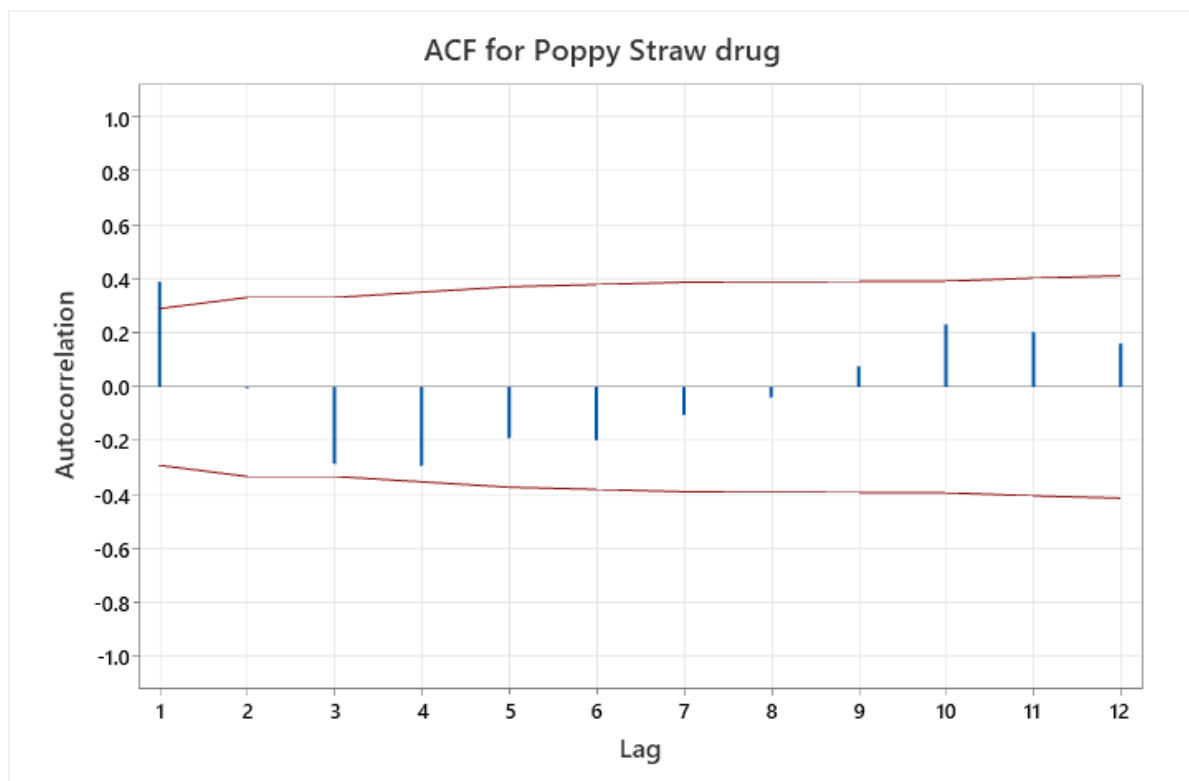
a=acorr_ljungbox(data, lags=[1], return_df=True)
print(a)
print("we see a p-value much less than 0.05, thus we reject our the null hypothesis , "
      "indicating the time series does contain an autocorrelation.")
```

```
lb_stat lb_pvalue
1 7.757096 0.00535
we see a p-value much less than 0.05, thus we reject our the null hypothesis ,indicating the time series does contain an autocorrelation.
```

- **ACF Plot of residuals**

### Autocorrelations

Lag	ACF	T	LBQ
1	0.389756	2.70	7.76
2	-0.004502	-0.03	7.76
3	-0.284177	-1.72	12.07
4	-0.292108	-1.67	16.72
5	-0.190294	-1.03	18.74
6	-0.196985	-1.04	20.96
7	-0.104506	-0.54	21.60
8	-0.038868	-0.20	21.69
9	0.077472	0.40	22.06
10	0.231902	1.19	25.45
11	0.203238	1.01	28.13
12	0.160730	0.78	29.86



ACF Plot of Residuals for Ephedrine

**Conclusion from ACF plots of residuals:** As all ACF values of residuals lies within a horizontal band which indicates that residuals form a white noise.

## Acetic Anhydride

Acetic anhydride, or ethanoic anhydride, is the chemical compound with the formula  $(\text{CH}_3\text{CO})_2\text{O}$ . Commonly abbreviated  $\text{Ac}_2\text{O}$ , it is the simplest isolable anhydride of a carboxylic acid and is widely used as a reagent in organic synthesis.



Acetic Anhydride Machine

\*Acetic Anhydride image

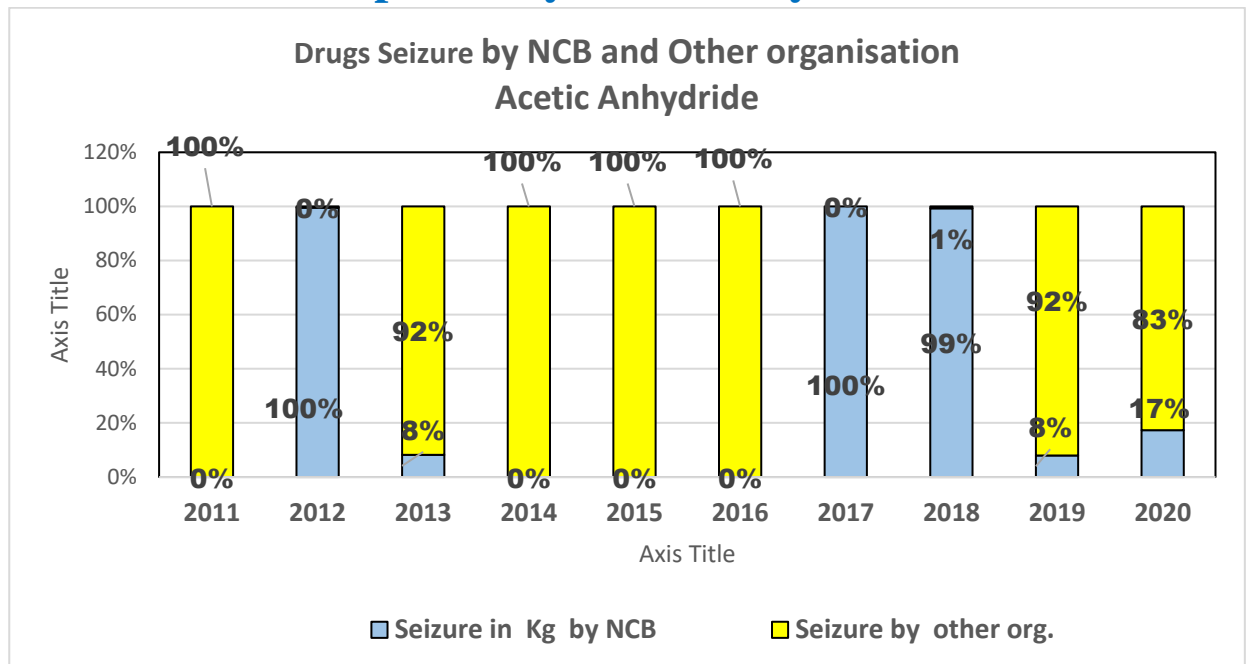
[<https://tajpharma.com/tajapi/Acetic%20anhydride.htm?hcb=1>]

### Seizure Data of Acetic Anhydride in 2011-2020

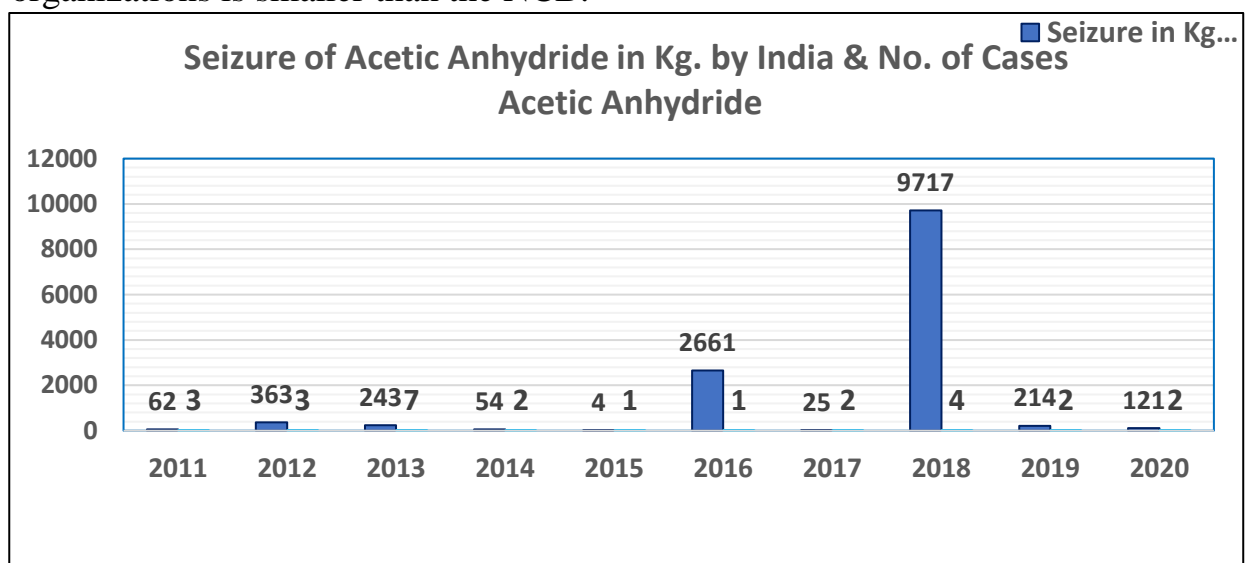
SR.	Year	Seizure By NCB in Kg.	Seizure by Other Orgs in Kg.	Seizure in India in Kg.	Cases in India
<b>Acetic Anhydride</b>					
1	2011	0	62	62	3
2	2012	361.33	1.67	363	3
3	2013	20	223	243	7
4	2014	0	54	54	2
5	2015	0	4	4	1
6	2016	0	2661	2661	1
7	2017	25	0	25	2
8	2018	9651	66	9717	4
9	2019	17	197	214	2
10	2020	21	100	121	2

In the above table, year wise seizure of Acetic Anhydride by NCB as well as by other organizations is given and the corresponding cases registered in India are also given. Note that there is one more column in the table 'Seizure in India in Kg.', it is the total of the columns 'Seizure by NCB in Kg.' and 'Seizure by other organizations in Kg.'.

## Exploratory Data Analysis



Here from the above plot that the seizure of Acetic Anhydride in Kg. by other organizations is smaller than the NCB.



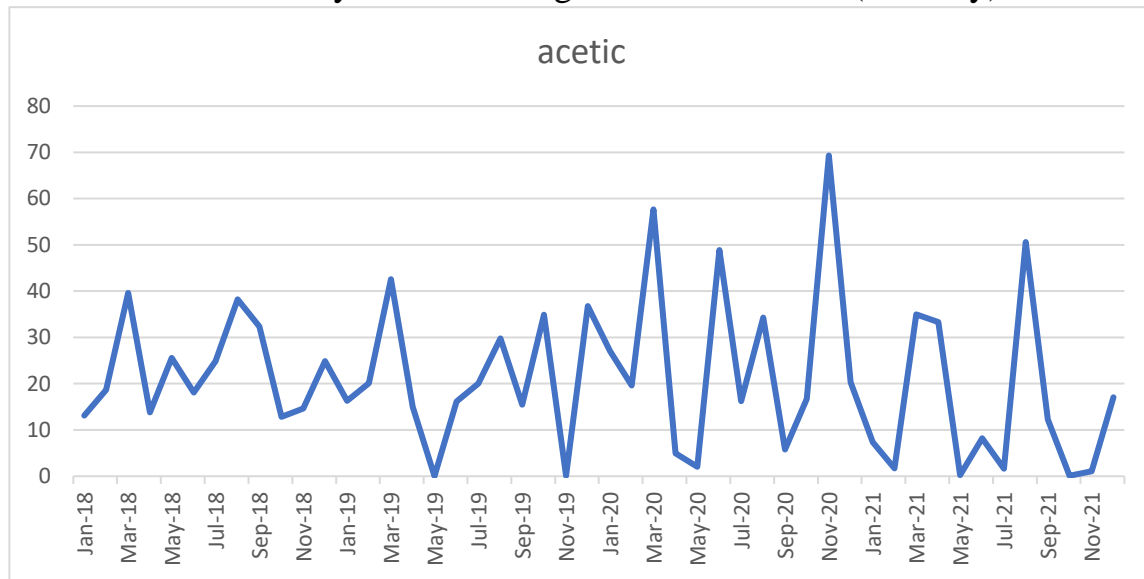
Seizure of Acetic Anhydride in India and Number of Cases

Note that each year the numbers of cases are less than the seizure of Acetic Anhydride in Kg. And maximum cases are seems to be register in 2008 for Acetic Anhydride.

Consider time series variables are follows:

$X_t$ : Amount of Acetic Anhydride in kg. from (monthly) 2018-2021

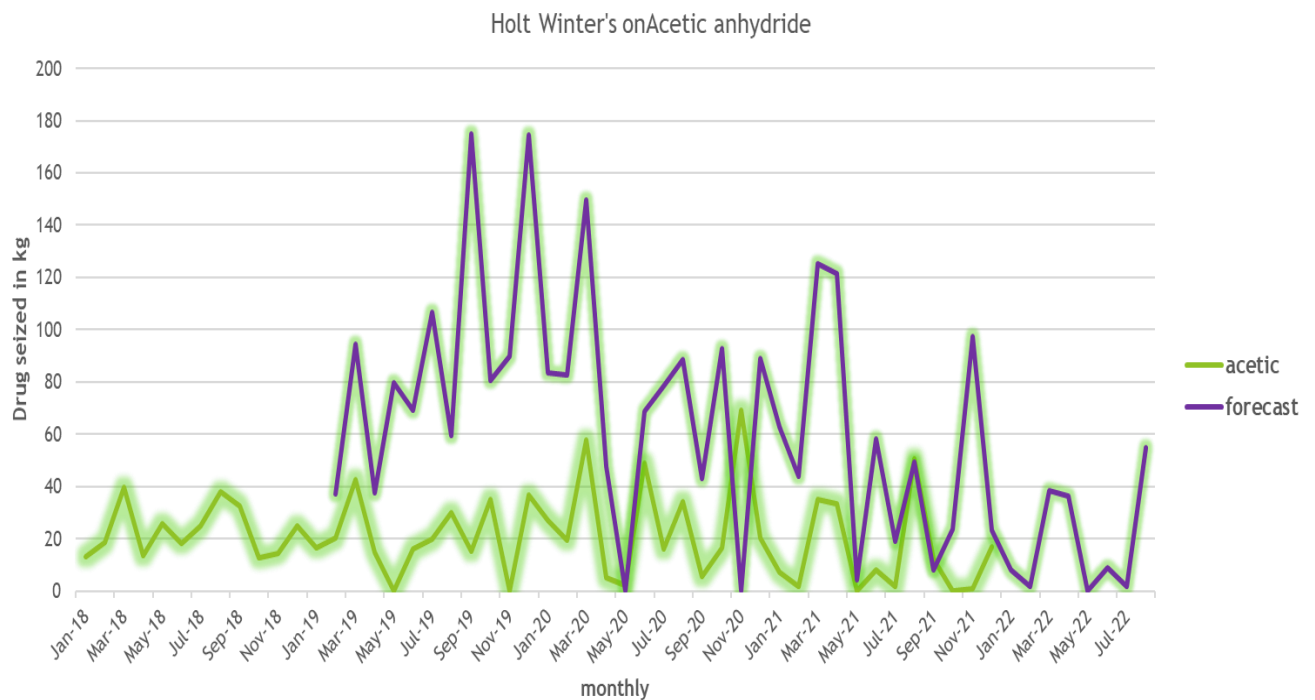
$Y_t$ : No. of Acetic Anhydride cases register in India from (monthly) 2018-2021



**Time Series Plot of Seizure of Acetic Anhydride in Kg.**

This is the time series plot for seizure of Acetic Anhydride in kg from the year 2018 to year 2021. Trend and seasonal pattern can be observed in the plot.

To estimate the observed trend and seasonal components and to forecast expected kg of drug to be seized in next 8 months, the Holt-winter seasonal algorithm has been used.



**Trend Analysis and Forecasting for Acetic Anhydride**

From the Holt-Winter algorithm we can see that the RMSE is 68.3537. Thus, we found the good fit of the data. We have forecasted 8 observations. Note that in the forecast it is showing an expected decreasing trend in the data.

- **Ljung Box**

The Ljung-Box and Box-Pierce tests are methods that test for the absence of autocorrelation in residuals.

```
import pandas as pd
data=pd.read_excel("acetic.xlsx",index_col=0)
data
from statsmodels.stats.diagnostic import acorr_ljungbox

a=acorr_ljungbox(data, lags=[1], return_df=True)
print(a)
print("we see a p-value much greater than 0.05, thus we do not reject our the null hypothesis ,"
```

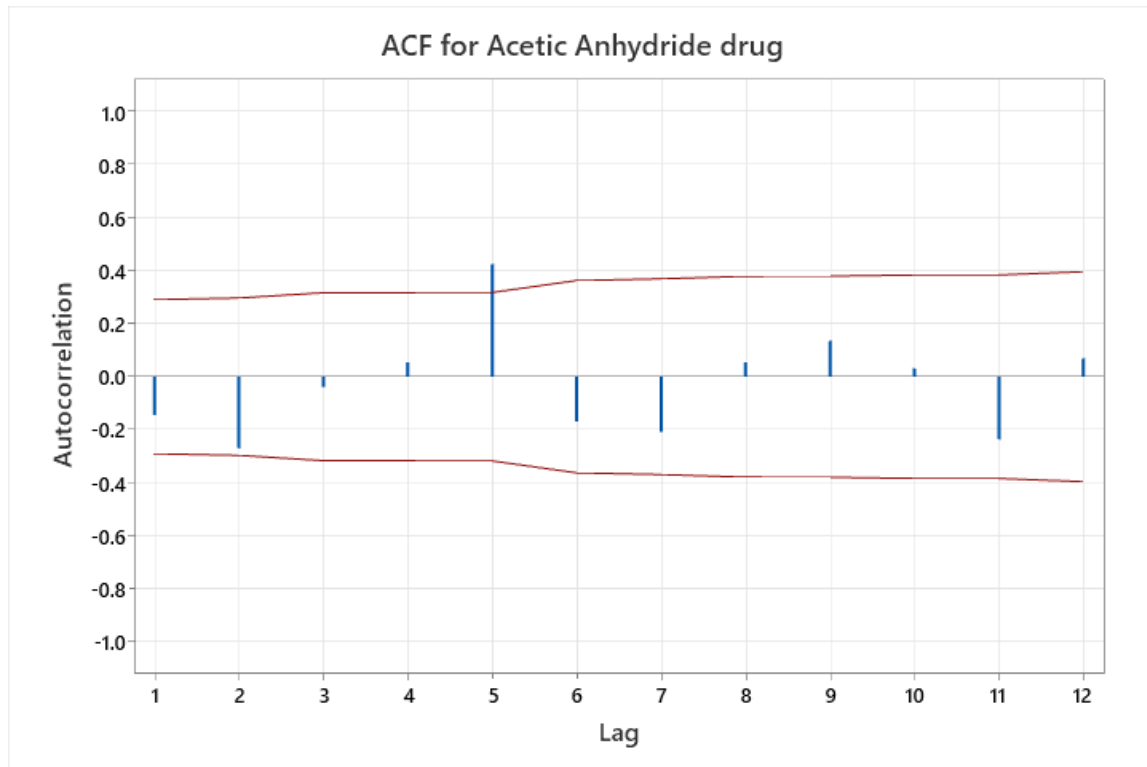
```
      lb_stat  lb_pvalue
1  1.074592    0.29991
we see a p-value much greater than 0.05, thus we do not reject our the null hypothesis ,indicating th
e time series does not contain an autocorrelation.
```

- **ACF Plot of residuals**

### Autocorrelations

Lag	ACF	T	LBQ
1	-0.145066	-1.01	1.07
2	-0.269570	-1.83	4.87
3	-0.038410	-0.24	4.94
4	0.054675	0.35	5.11
5	0.424064	2.69	15.14
6	-0.168667	-0.94	16.77
7	-0.207316	-1.13	19.29
8	0.054878	0.29	19.47
9	0.136117	0.72	20.61
10	0.032295	0.17	20.67
11	-0.236854	-1.24	24.31
12	0.068535	0.35	24.63





ACF Plot of Residuals for Acetic Anhydride

**Conclusion from ACF plots of residuals:** As all ACF values of residuals lies within a horizontal band which indicates that residuals forms a white noise.

### 4.1.1 Conclusions

According to the above analysis it is observed that

- Ganja is very frequency used drug than other types of drug.
- We suspect that drug trafficking in India will have increasing trend but this is not the case actually.
- Every year it is seems that the seizure drug is not increased always. There are ups and down in this pattern of seizure of drug.
- These ups and downs are seizure quantity may be because sometimes strict measures are taken by authorities which leads to decrease in trend of drug crime. However sometimes traffickers may find new routes for their purpose which again leads in drug trafficking.
- The main important thing is the government of India has been invented the NCB for the drug trafficking but perhaps what is happening that the

drug seizure by the NCB is less than the drug seizure by other organization.

- And again main important thing is the total drug seizure is maximum as compare to the total cases register for drug trafficking.

## 4.2 Statewise Seizure in Kg.

### State wise data

Statewise drug seizure in (Kg.) after each three year from 2011-2020. Here taken data for year 2011, 2014, 2017, 2020 for those states in which a highest total seizure in Kg.

Objective: a) To study which states are more involved in drug crimes.  
b) To see recently which state has highest frequency of drug Kg. and which has lowest frequency.

### 4.2.1 Drug seizure for corresponding states in Kg.

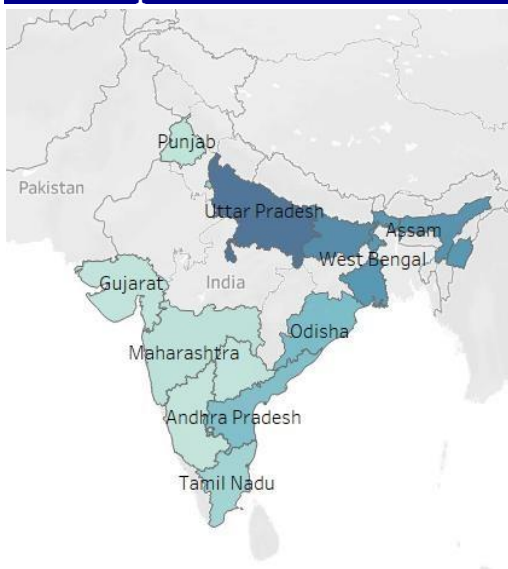
States	2011	2014	2017	2020
--------	------	------	------	------

<b>Assam</b>	4994.4	4850.17	3311.01	9256.162
<b>Meghalaya</b>	-	-	6829.99	989.816
<b>Manipur</b>	4729.37	-	-	4533.641
<b>Uttar Pradesh</b>	6836.36	3759.64	275.4	327420.562
<b>Maharashtra</b>	263.74	132.469	89.358	28832.304
<b>Delhi</b>	1314.93	138.7	101.997	5483.247
<b>Punjab</b>	143.27	275.866	261.758	37364.676
<b>Himachal Pradesh</b>	-	19.78	-	3899.779
<b>Tamil Nadu</b>	1135.91	-	310.45	298785.294
<b>Rajasthan</b>	-	1227.31	83.785	148602.246
<b>Karnataka</b>	6.614	1.2	781.608	21729.793
<b>Jammu and Kashmir</b>	5.032	120.023	65.78	27361.353
<b>Jharkhand</b>	-	-	70	8830.645
<b>Madhya Pradesh</b>	-	395.26	3.78	58084.552
<b>Bihar</b>	5455	537.25	7811.25	13162.231
<b>West Bengal</b>	4781.4	12921.2	2814	25509.802
<b>Orissa</b>	2611.5	5071.5	1172.85	81847.001
<b>Haryana</b>	231	44.793	71.27	24695.602
<b>Gujarat</b>	110.887	163.304	1459.85	13213.214
<b>Telangana</b>	97.557	-	1539.36	19708.291
<b>Kerala</b>	-	22.91	22.369	3060.459
<b>Nagaland</b>	-	-	-	791.676

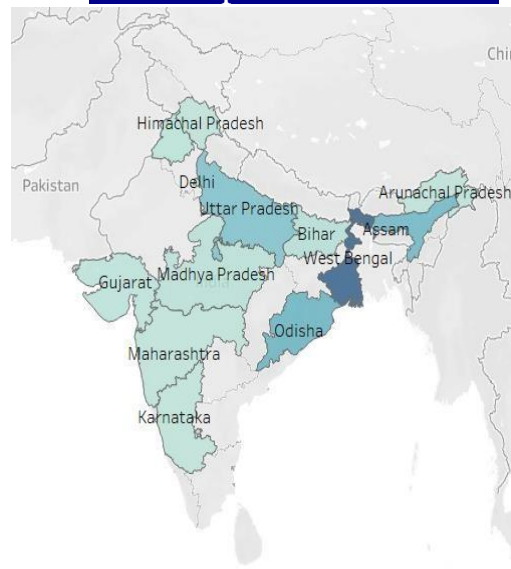
<b>Andhra Pradesh</b>	2420	-	3790	106042.775
<b>Arunachal Pradesh</b>	-	16.572	-	4032.54

While understanding the data we plotted some graphs for those years which are mentioned upward with the help of **Tableau software** [Tableau is data visualization software] such as:

India map for data 2011

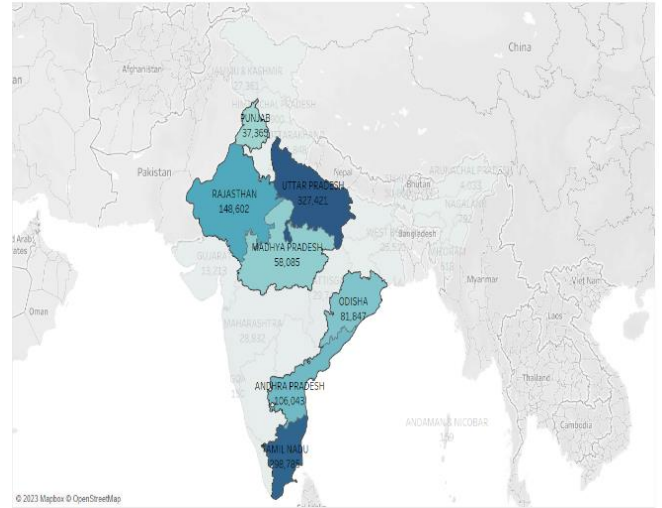
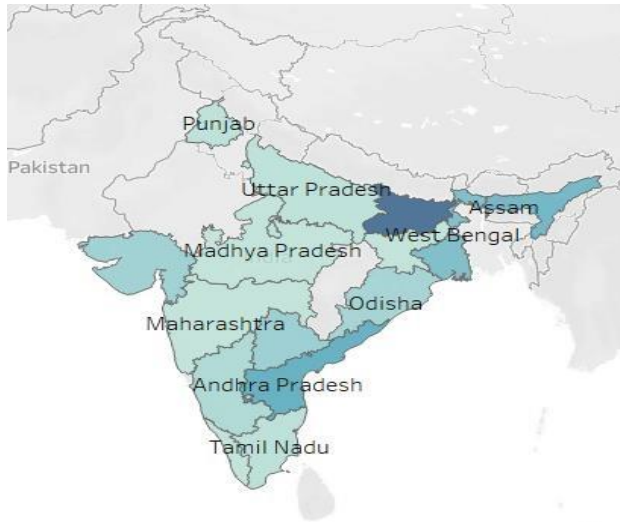


India map for data 2014



India map for data 2017

India map for data 2020



These all map are predicting one important thing that the mostly drug trafficking happening in North-East and South-East part of India. And also, we can say that the East part of India is in maximum way in drug trafficking.

And some states have seizure in each year repeatedly in drug trafficking. States such as: Assam, Maharashtra, Delhi, Punjab. Also note that some states are maximum way and some are in minimum way in drug trafficking which we can see with the help of pareto chart regarding each year. The Pareto chart are used to see that in which year perhaps which states have maximum seizure of drug in Kg.

For Pareto Chart we have used some shortcuts to introduce the states such as:

Assam, Meghalaya=MG, Manipur, Uttar Pradesh=UP, Maharashtra=MH, Delhi, Punjab, Himachal Pradesh=HP, Tamil Nadu=TN, Rajasthan=RJ, Karnataka=KT, Jammu and Kashmir= J&K, Jharkhand=JK, Madhya Pradesh=MP, Bihar, West Bengal=WB, Orissa, Haryana=HY, Gujarat=GJ, Telangana=TG, Kerala, Andhra Pradesh=AP, Arunachal Pradesh=Arp

### **Pareto Analysis Drugs Seizure in Kg. for 2011**

Objective of Pareto analysis is to study which are the top 20% states which have 80% share in drug trafficking [i.e. which are the top 20% states in which 80% seizure of drug out of total seizure of drug in 2011].

**Table: % of drug seizer of different states in 2011:**

States	Drugs (Kg.)	% Share	Cumulative % Share
Uttar Pradesh	6836.36	19.45632	19.45631624
Bihar	5455	15.52496	34.98127471
Assam	4994.4	14.21409	49.19536317
West Bengal	4781.4	13.60789	62.80325253
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Telangana	97.557	0.277648	99.96685542
Karnataka	6.614	0.018823	99.9856789
Jammu and Kashmir	5.032	0.014321	100
	35136.97	100	

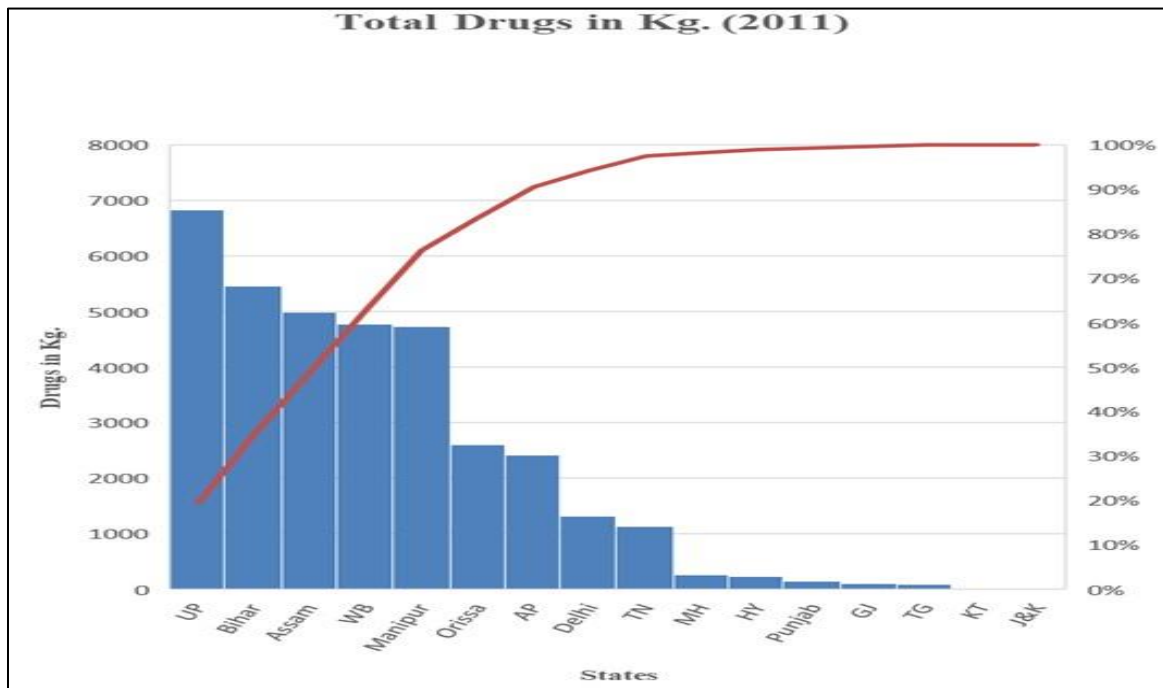


Figure 4.65: Pareto Chart for State-wise Total Drug Seizure in Kg. in 2011

### Conclusion:

Above pareto analysis shows that the top five states having highest percentages of drug trafficking are Uttar Pradesh, Bihar, West Bengal, Assam and Manipur 76% drug is seizure in these five states out of total drug seizure in 2011, while Punjab, Gujarat, Telangana, Karnataka and Jammu & Kashmir there five states together have only 1% drug seizure.

## Pareto Analysis of Drugs Seizure in Kg. for 2014

Objective of Pareto analysis is to study which are the top 20% states which have 80% share in drug trafficking [i.e. which are the top 20% states in which 80% seizure of drug out of total seizure of drug in 2014] .

**Table: % of drug seizer of different states in 2014:**

States	Drug (Kg.)	% Share	Cumulative % Share
West Bengal	12921.2	43.50873	43.50873143
Orissa	5071.5	17.07694	60.58566944
Assam	4850.17	16.33167	76.91733708
Uttar Pradesh	3759.64	12.6596	89.57693271
Rajasthan	1227.31	4.132643	93.70957528
Bihar	537.25	1.809048	95.51862289
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Haryana	44.793	0.150829	99.79641017
Kerala	22.91	0.077143	99.87355355
Himachal Pradesh	19.78	0.066604	99.94015748
Arunachal Pradesh	16.572	0.055802	99.99595932
Karnataka	1.2	0.004041	100
	29697.95	100	



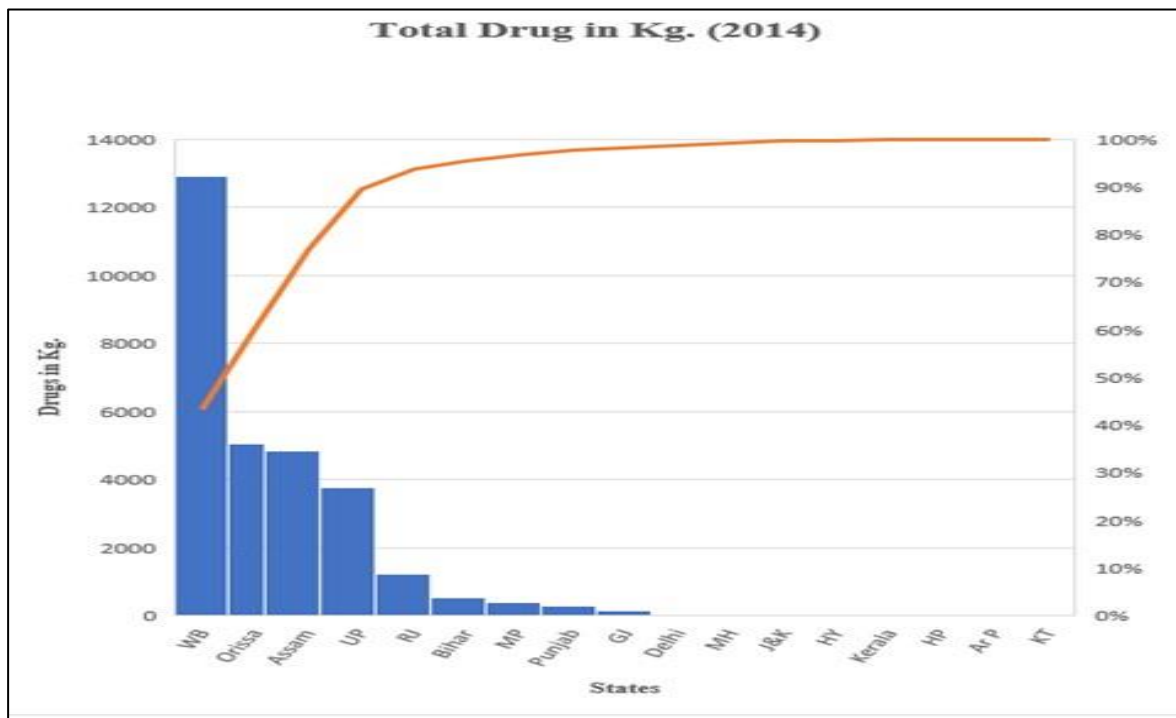


Figure 4.66: Pareto Chart for State-wise Total Drug Seizure in Kg. in 2014

**Conclusion:** Above pareto analysis shows that fore states West Bengal, Orissa, Assam and Uttar Pradesh are top four states which leads to 89% drug trafficking i.e., 89% of total drug is seizure in these four states only whereas Maharashtra, Jammu & Kashmir, Haryana, Kerala, Himachal Pradesh are the seven states in which only 1% of total drug is seized.

### Pareto Analysis of Drugs Seizure in Kg. for 2017

Objective of Pareto analysis is to study which are the top 20% states which have 80% share in drug trafficking [i.e. which are the top 20% states in which 80% seizure of drug out of total seizure of drug in 2017].

Table: % of drug seizer of different states in 2017:

States	Drug (Kg.)	% Share	Cumulative % Share
Bihar	7811.248	25.3070746	25.30707464
Meghalaya	6829.99	22.1279707	47.43504532
Andre Pradesh	3790	12.2789358	59.71398114
Assam	3311.01	10.7270922	70.44107331
West Bengal	2814	9.11686686	79.55794017

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Jammu and Kashmir	65.78	0.21311567	99.91528182
Kerala	22.369	0.07247164	99.98775346
Madhya Pradesh	3.78	0.01224654	100
Total	30865.867	100	

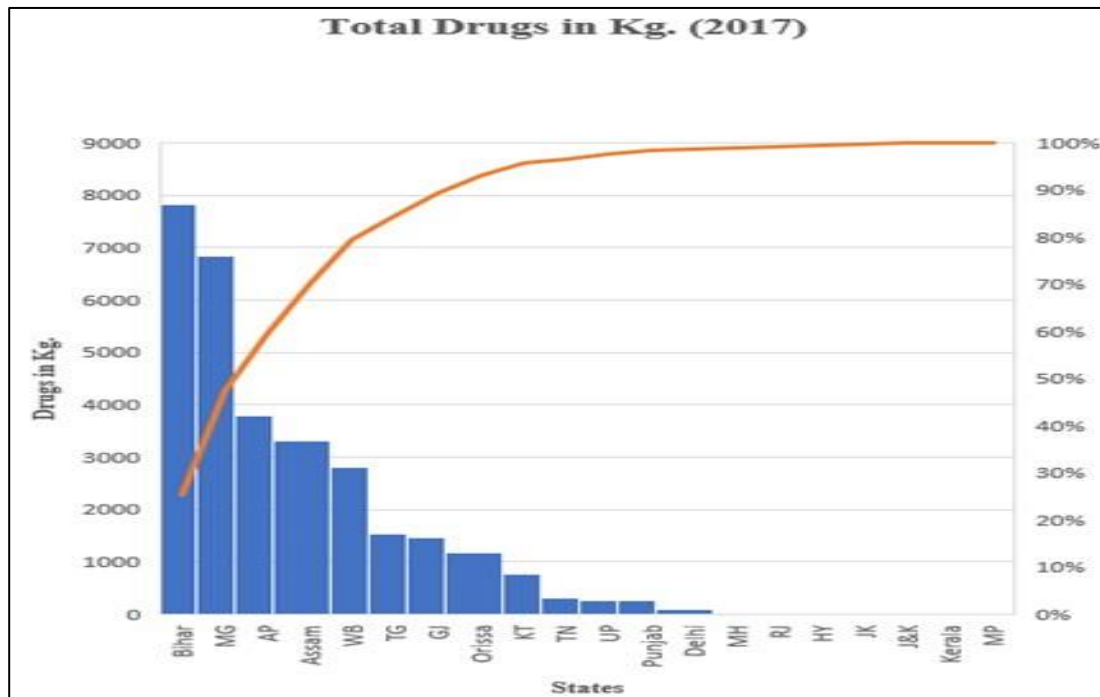


Figure 4.67: Pareto Chart for State-wise Total Drug Seizure in Kg. in 2017

### Conclusion:

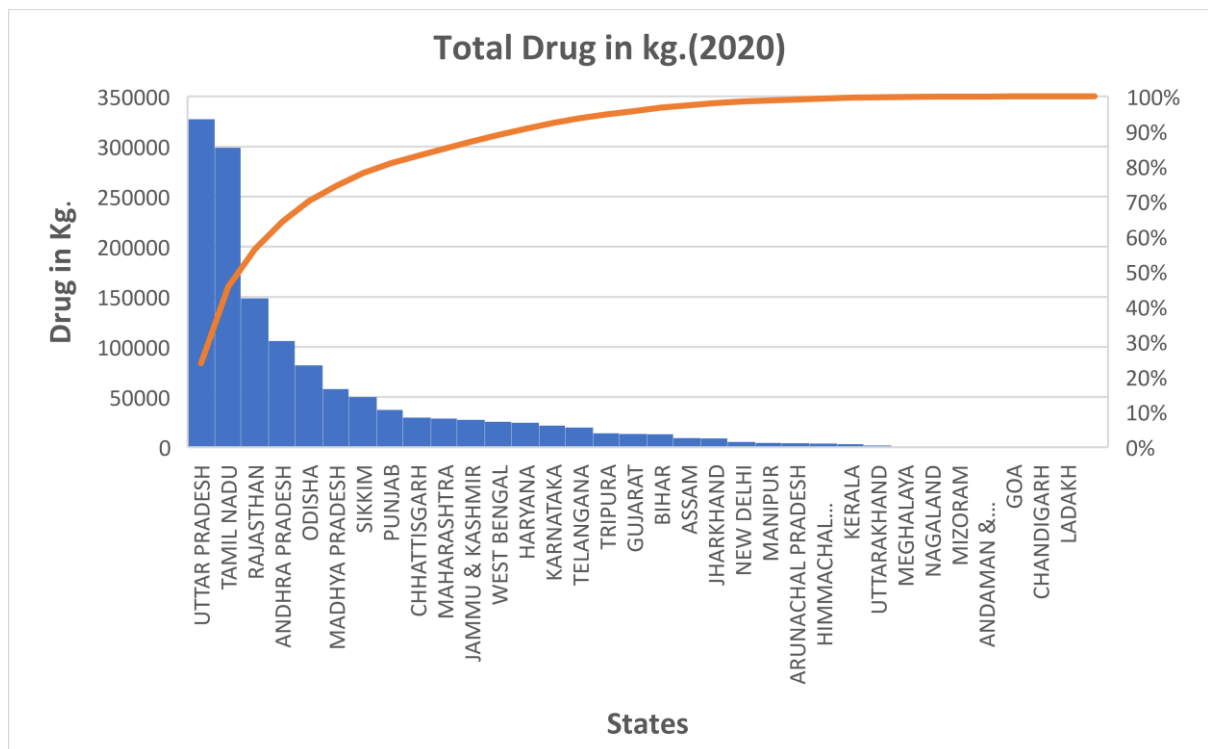
Above pareto analysis shows that Bihar, Meghalaya, Andhra Pradesh, Assam and West Bengal are top five seizure in which 80% of total drug is seizure i.e. there 20% states leads to 80% drug trafficking while Rajasthan, Haryana, Jharkhand, Jammu & Kashmir, Kerala and Madhya Pradesh have 1% drug.

## **Pareto Analysis Drugs Seizure in Kg. for 2020**

Objective of Pareto analysis is to study which are the top 20% states which have 80% share in drug trafficking [i.e., which are the top 20% states in which 80% seizure of drug out of total seizure of drug in 2020].

**Table: % of drug seizer of different states in 2020:**

<b>states</b>	<b>All drugs in Kg(2020)</b>	<b>% Share</b>	<b>Cumulative % Share</b>
UTTAR PRADESH	327420.562	23.902	23.902
TAMIL NADU	298785.294	21.811	45.713
RAJASTHAN	148602.246	10.848	56.561
ANDHRA PRADESH	106042.775	7.741	64.303
ODISHA	81847.001	5.975	70.277
MADHYA PRADESH	58084.552	4.240	74.518
SIKKIM	50000.387	3.650	78.168
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UTTARAKHAND	1848.326	0.135	99.796
MEGHALAYA	989.816	0.072	99.868
NAGALAND	791.676	0.058	99.926
MIZORAM	617.735	0.045	99.971
ANDAMAN & NICOBAR	159.235	0.012	99.982
GOA	149.542	0.011	99.993
CHANDIGARH	95.953	0.007	100.000
LADAKH	0	0.000	100.000



### Conclusion:

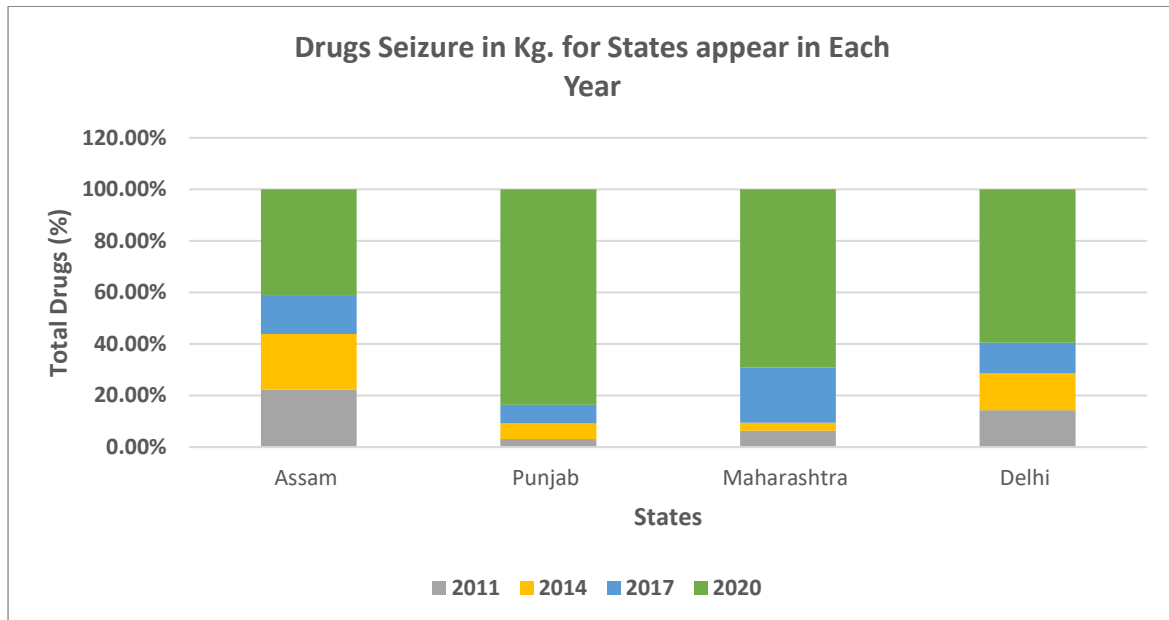
Above pareto analysis shows that Uttar Pradesh, Tamil Nadu, Rajasthan, Andhra Pradesh and Odisha are top five seizure in which 80% of total drug is seizure i.e. there 20% states leads to 80% drug trafficking while from table Bihar to Chandigarh have 1% drug and Ladakh only state have 0% drug.

### Drugs Seizure for States appear in each year

- While looking to the data we also understood that some states are repeating simultaneously for each year.
- States such as Assam, Punjab, Maharashtra, Delhi
- So for them we have synthesize sub-divided bar graph

From the above pareto charts analysis, we have found some states, which are appear in each of this 2011, 2014, 2017 and 2020. Hence the following data is as follows:

These four states are seizure continually in each year but from even those states Assam is seizure in maximum as compare to another states. Then Punjab and Maharashtra faced most no. of seizure in 2020 And throughout the analysis East zone is in maximum toward the drug trafficking.



## 4.2.2 Discussion

Throughout the analysis we understood that in all over India the East zone is maximally involved in drug trafficking. The meaning of East zone is the states which are involved in drug trafficking they are from East India, South-East India, and North-East India. As per we have mentioned the golden crescent in introduction chapter while looking toward it over all analysis is perfectly predicted. As per we can see according to our data in each year any different country comes and get involved in the drug trafficking, where we can see at 2020 there are 20 states which are involved in drug trafficking. Where we can see the network of the drug trafficking is getting covered to the all over India.

So, the drug trafficking will come in control but when the agencies which are formed by Government of India such as NCB must be more strict in east part of India not only on East part of India because there is large amount in drug trafficking but it must be strict on all over India, then only then the whole India will come in control for the drug trafficking.

## Chapter 5

### Conclusion and References

#### Conclusion

As per overall analysis we worked on two datasets:

- The drug seizure in India and the cases register in India,
- The state-wise seizure for various types of drugs in kg

These datasets are secondary, independent and they are collected from NCB annual reports. While reading all the NCB annual reports.

While looking toward the first dataset, we understood that:

The drug trafficking is increasing simultaneously year wise. So here we have done the analysis for:

- The drug seizure by NCB and the drug seizure by other organizations in Kg. Then this analysis shows the output such as, the drug seizure by NCB is less than the drug seizure by other organizations.
- The total drug seizure and the total cases register for different drugs then this analysis shows that output such as, the total drug seizure is maximum as per the total cases register.

Now, while looking toward the second dataset we understood that:

- There are so many states in India which are facing the drug trafficking. But from those states, states from east part of India have largest contribution in drug trafficking and those are Assam, Meghalaya, Nagaland and so on. Also, there are some states like Maharashtra, Assam, Punjab and Delhi are repeated in each year in the drug trafficking scenario

From this all information we can conclude that the drug trafficking is increasing in our surrounding areas. There are so many actions has been taken by Government of India. Now the awareness is must important so that this condition will come in control.

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