IMPORT LIBRARIES

In [1]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

read the dataset

In [112]:
```
df1 = pd.read_csv('FDI data.csv',index_col=[0])
df1.head()
```

Out[112]:

Sector	METALLURGICAL INDUSTRIES	MINING	POWER	NON-CONVENTIONAL ENERGY	COAL PRODUCTION	PETROLEUM & NATURAL GAS	ANI GENI
2000-01	22.69	1.32	89.42	0.00	0.00	9.35	
2001-02	14.14	6.52	757.44	0.00	0.00	211.07	
2002-03	36.61	10.06	59.11	1.70	0.00	56.78	
2003-04	8.11	23.48	27.09	4.14	0.04	80.64	
2004-05	200.38	9.92	43.37	1.27	0.00	102.78	

5 rows × 16383 columns

In [113]:
```
df1.drop(df1.iloc[:,63:],axis=1,inplace=True)
df1.head()
```

Out[113]:

Sector	METALLURGICAL INDUSTRIES	MINING	POWER	NON-CONVENTIONAL ENERGY	COAL PRODUCTION	PETROLEUM & NATURAL GAS	ANI GEN
2000-01	22.69	1.32	89.42	0.00	0.00	9.35	
2001-02	14.14	6.52	757.44	0.00	0.00	211.07	
2002-03	36.61	10.06	59.11	1.70	0.00	56.78	
2003-04	8.11	23.48	27.09	4.14	0.04	80.64	
2004-05	200.38	9.92	43.37	1.27	0.00	102.78	

5 rows × 63 columns

In [114]:
```
df=df1.T
df.head(3)
```

Out[114]:

Sector	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
METALLURGICAL INDUSTRIES	22.69	14.14	36.61	8.11	200.38	149.13	169.94	1175.75	959.94	419.88
MINING	1.32	6.52	10.06	23.48	9.92	7.40	6.62	444.36	34.16	174.40
POWER	89.42	757.44	59.11	27.09	43.37	72.69	157.15	988.68	907.66	1271.79

In [115]:
```
df.shape
```

Out[115]: (63, 17)

data preprocessing

In [116]:
```
nv = df1.isnull().sum()
nv
nv.dropna()
```

Out[116]:
```
METALLURGICAL INDUSTRIES
0
MINING
0
POWER
0
NON-CONVENTIONAL ENERGY
0
COAL PRODUCTION
0


..
PRINTING OF BOOKS (INCLUDING LITHO PRINTING INDUSTRY)
0
COIR
0
CONSTRUCTION (INFRASTRUCTURE) ACTIVITIES
0
CONSTRUCTION DEVELOPMENT: Townships, housing, built-up infrastructure and co
nstruction-development projects    0
MISCELLANEOUS INDUSTRIES
0
Length: 63, dtype: int64
```

In [117]:
```
# handling null values
def fetch_count_per_null_val(data):
    nv = data.isnull().sum()
    nv = nv[nv>0]
    nv_df = pd.DataFrame({'Feature':nv.index,'Count_Null':nv.values,
                          'Per_Null':(nv.values/data.shape[0])*100})
    nv_df = nv_df.sort_values('Per_Null', ascending=False)
    return nv_df
```

In [118]:
```
nv_df = fetch_count_per_null_val(df)
nv_df
```

Out[118]:

	Feature	Count_Null	Per_Null

In [119]:
```
# handling duplicates
df.duplicated().sum()
```

Out[119]:
```
0
```

Statistical analysis

In [120]:
```
df1.describe()
```

Out[120]:

	METALLURGICAL INDUSTRIES	MINING	POWER	NON-CONVENTIONAL ENERGY	COAL PRODUCTION	PETROLEUM & NATURAL GAS
count	17.000000	17.000000	17.000000	17.000000	17.000000	17.000000
mean	607.678824	133.637059	681.713529	304.793529	1.631765	403.303529
std	590.318680	209.032041	524.452076	359.716927	3.929237	568.490900
min	8.110000	1.320000	27.090000	0.000000	0.000000	9.350000
25%	149.130000	9.920000	89.420000	1.700000	0.000000	87.710000
50%	419.880000	34.160000	757.440000	125.880000	0.000000	180.400000
75%	1098.140000	142.650000	1066.080000	615.950000	0.220000	349.290000
max	1786.140000	684.390000	1652.380000	1106.520000	14.080000	2029.980000

8 rows × 63 columns

In [121]:
```
df.describe()
```

Out[121]:

Sector	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
count	63.000000	63.000000	63.000000	63.000000	63.000000	63.000000	63.000000
mean	37.757302	63.931587	42.925714	34.727778	51.090317	87.932540	198.281905
std	112.227860	157.878737	86.606439	67.653735	101.934873	206.436967	686.783115
min	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25%	0.000000	0.000000	0.200000	0.215000	0.715000	1.230000	4.160000
50%	4.030000	5.070000	11.010000	6.370000	9.090000	22.620000	25.820000
75%	23.510000	44.830000	36.555000	38.660000	43.205000	63.855000	108.325000
max	832.070000	873.230000	419.960000	368.320000	527.900000	1359.970000	4713.780000

In [ ]:
```
```

In [ ]:

Exploratory data analysis

In [122]:
```
df1['Total FDI'] = df1.iloc[:, :].sum(axis=1)
```

In [123]:
```
df1_sorted = df1.sort_values(by='Total FDI', ascending=False)
```

In [124]:
```
print(df1_sorted[['Total FDI']])
```

```
         Total FDI
Sector
2016-17   43478.26
2015-16   40000.99
2011-12   35120.78
2008-09   31395.96
2014-15   30930.47
2009-10   25834.38
2007-08   24575.40
2013-14   24299.32
2012-13   22423.59
2010-11   21383.07
2006-07   12491.76
2005-06    5539.75
2001-02    4027.69
2004-05    3218.69
2002-03    2704.32
2000-01    2378.71
2003-04    2187.85
```

In [125]:
```
start_year = '2000-01'
end_year = '2010-11'
```

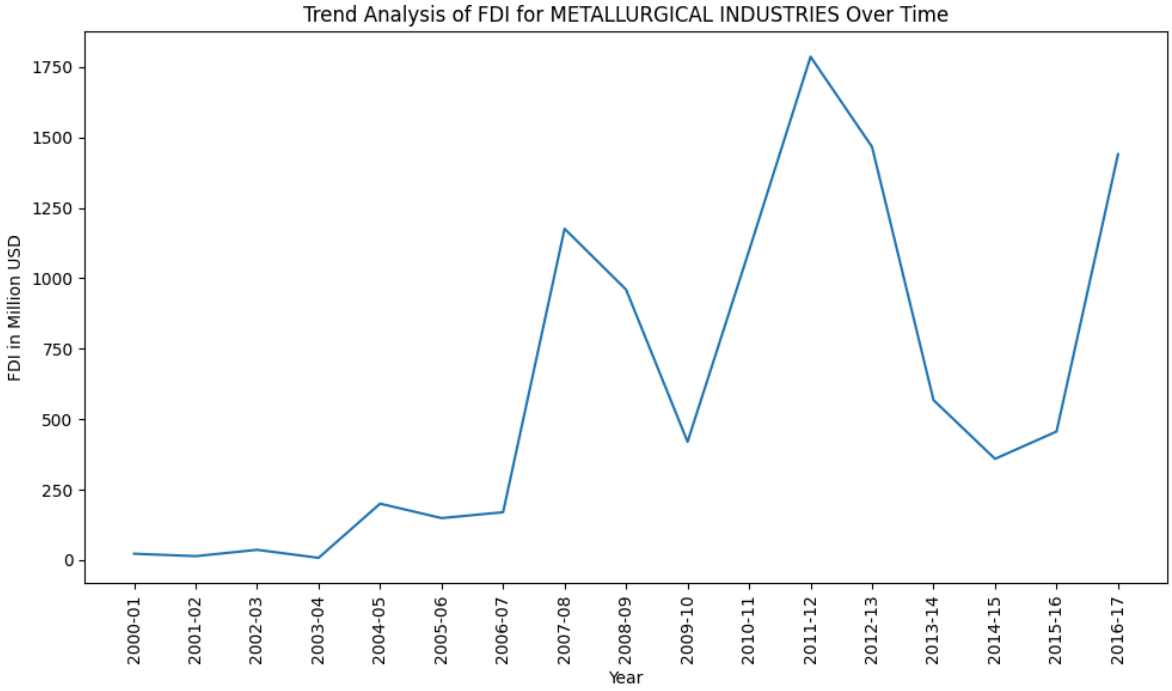
In [126]:
```
df['Total FDI'] = df.loc[:, start_year:end_year].sum(axis=1)
```

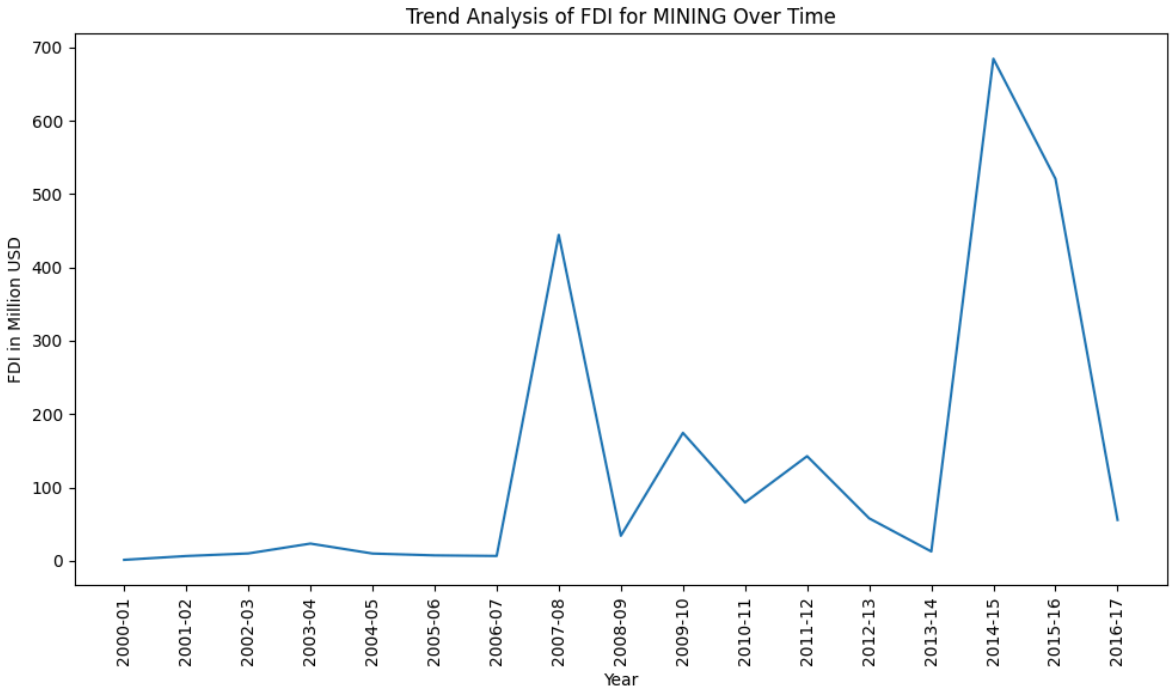
In [127]:
```
df_sorted = df.sort_values(by='Total FDI', ascending=False)
```

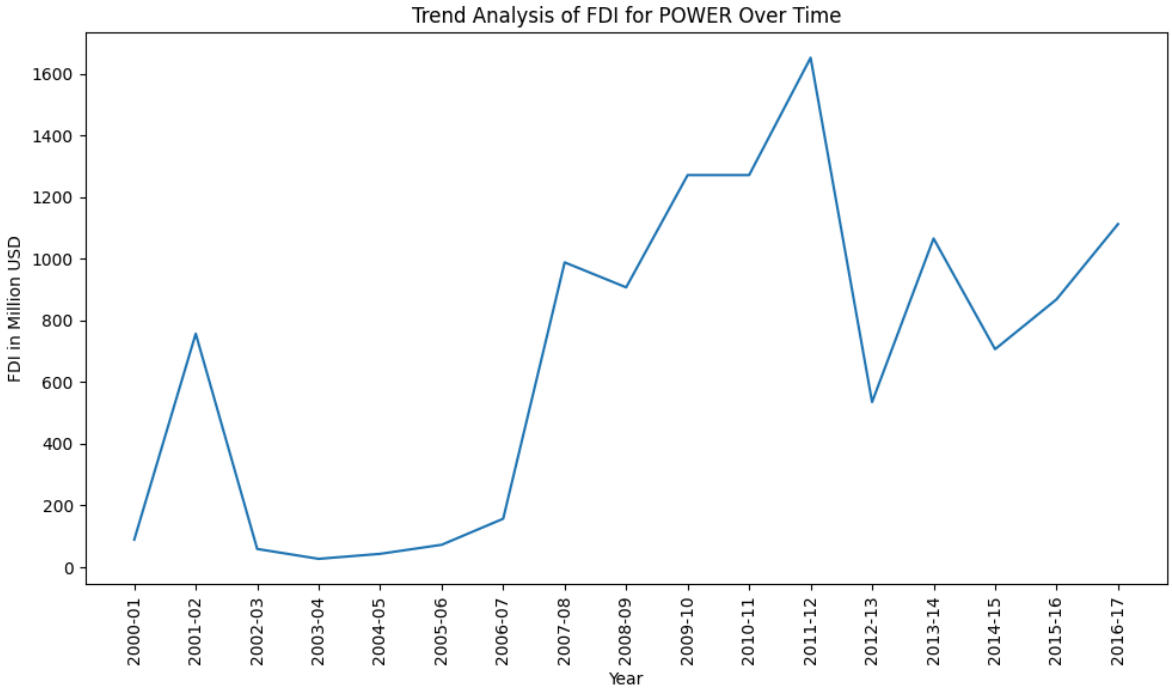
In [128]:
```
print(df_sorted[['Total FDI']])
```

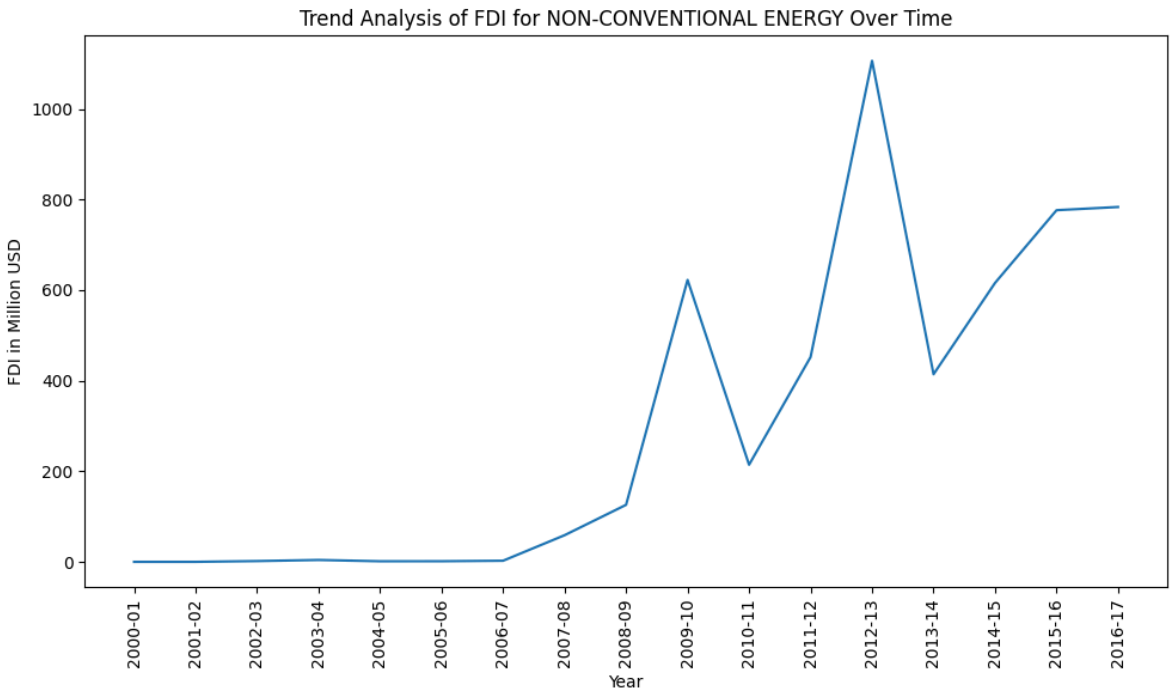
```
Sector                                                Total FDI
SERVICES SECTOR (Fin.,Banking,Insurance,Non Fin...   27185.64
CONSTRUCTION DEVELOPMENT: Townships, housing, b...   17606.94
TELECOMMUNICATIONS                                   10554.92
COMPUTER SOFTWARE & HARDWARE                         10408.80
MISCELLANEOUS INDUSTRIES                              6800.79
...                                                       ...
BOILERS AND STEAM GENERATING PLANTS                      9.99
GLUE AND GELATIN                                         8.72
COIR                                                     1.46
MATHEMATICAL,SURVEYING AND DRAWING INSTRUMENTS           1.27
DEFENCE INDUSTRIES                                       0.05

[63 rows x 1 columns]
```

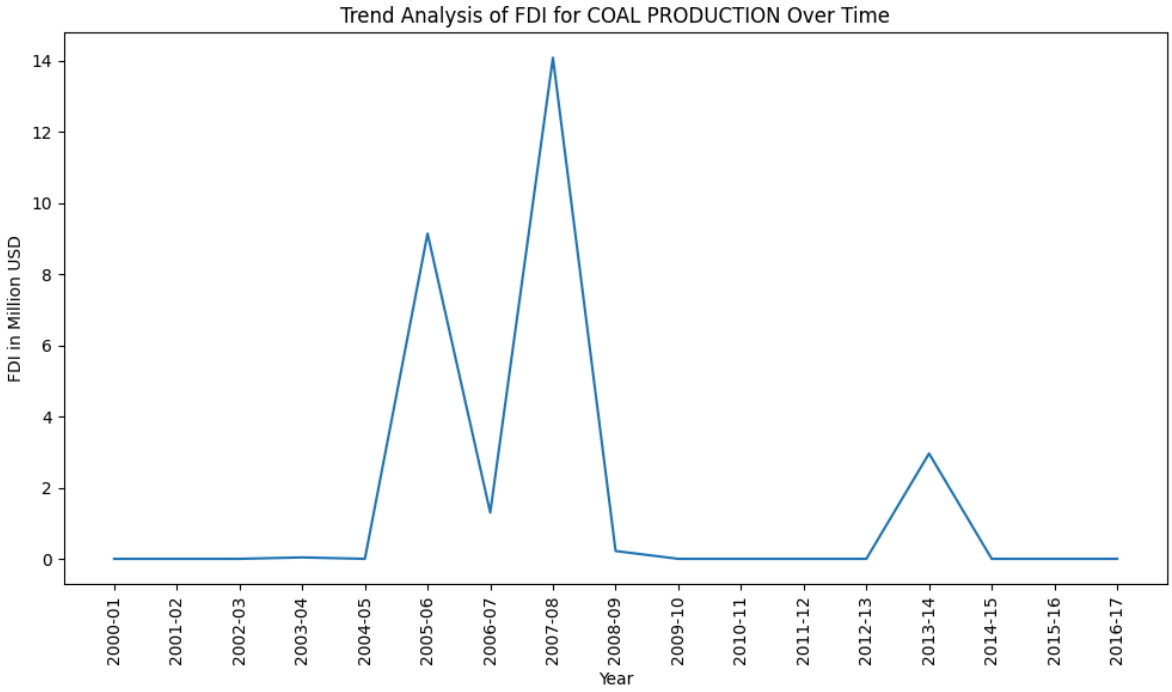
In [129]:
```
for sector in df1.columns:
    plt.figure(figsize=(10, 6))
    plt.plot(df1.index, df1[sector])
    plt.xticks(rotation=90)
    plt.xlabel('Year')
    plt.ylabel('FDI in Million USD')
    plt.title(f'Trend Analysis of FDI for {sector} Over Time')
    plt.tight_layout()
    plt.show()
```

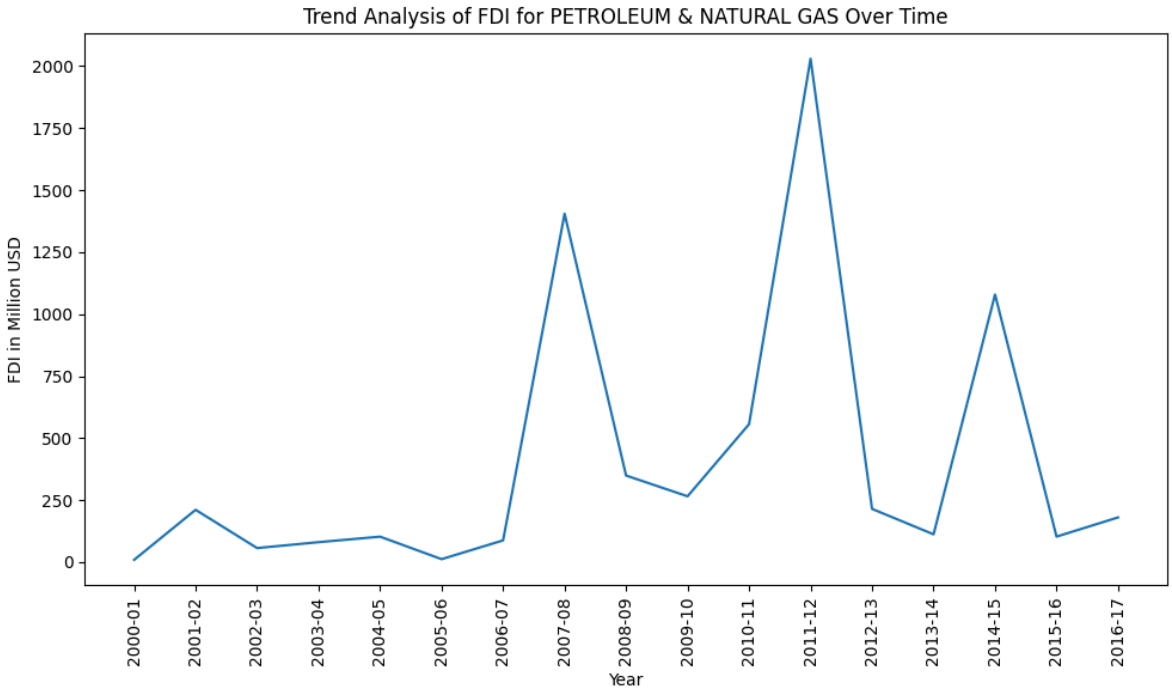


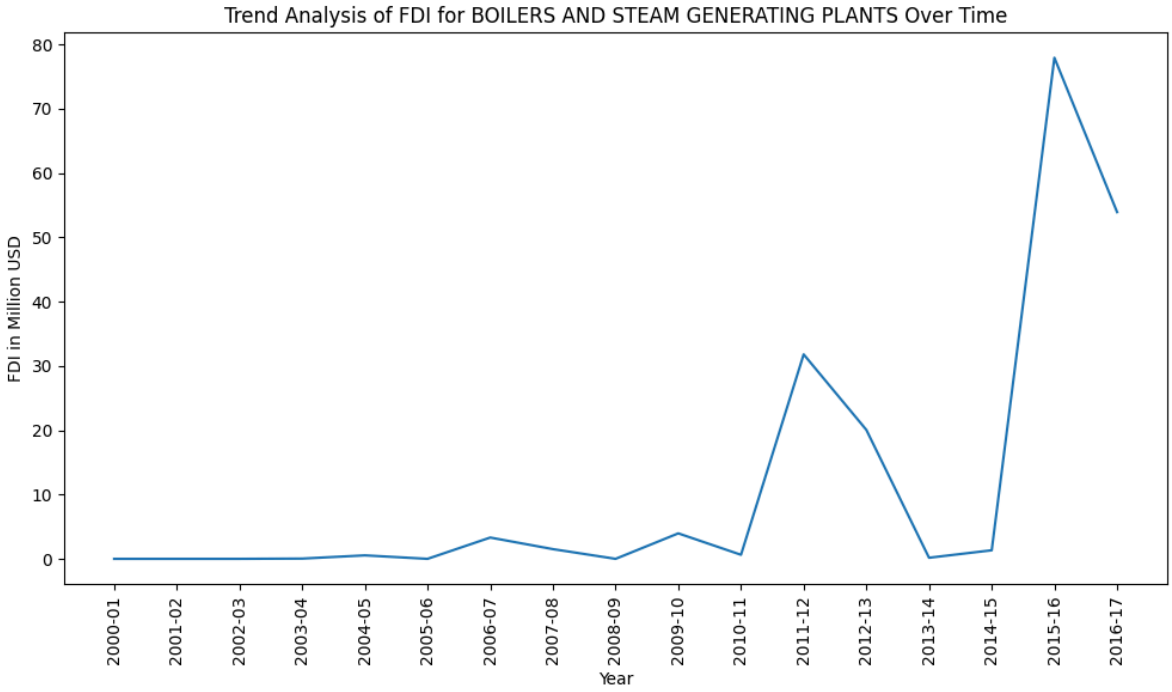


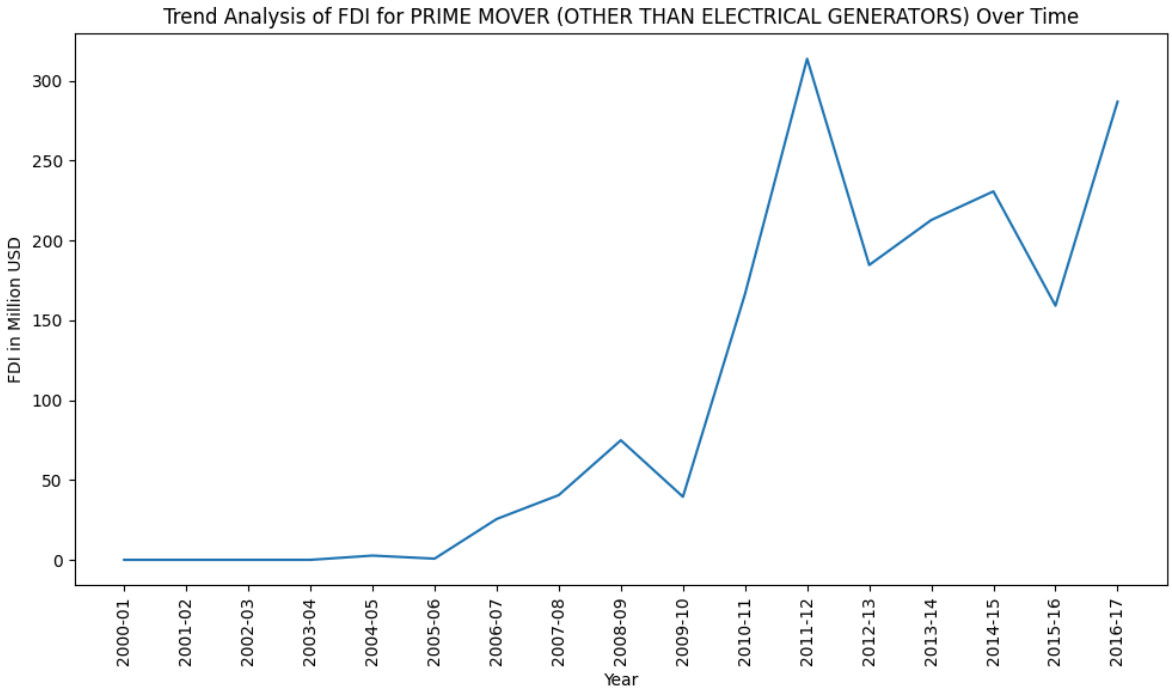

Trend Analysis of FDI for POWER Over Time
FDI in Million USD
0
200
400
600
800
1000
1200
1400
1600
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

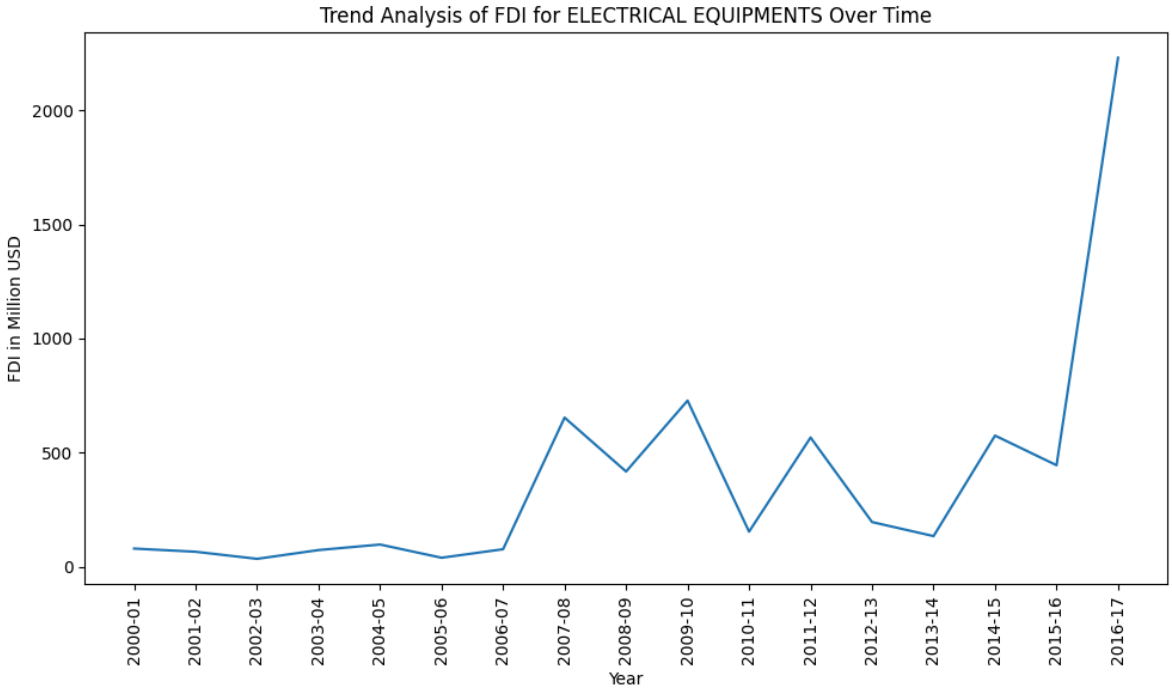

Trend Analysis of FDI for NON-CONVENTIONAL ENERGY Over Time
FDI in Million USD
0
200
400
600
800
1000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

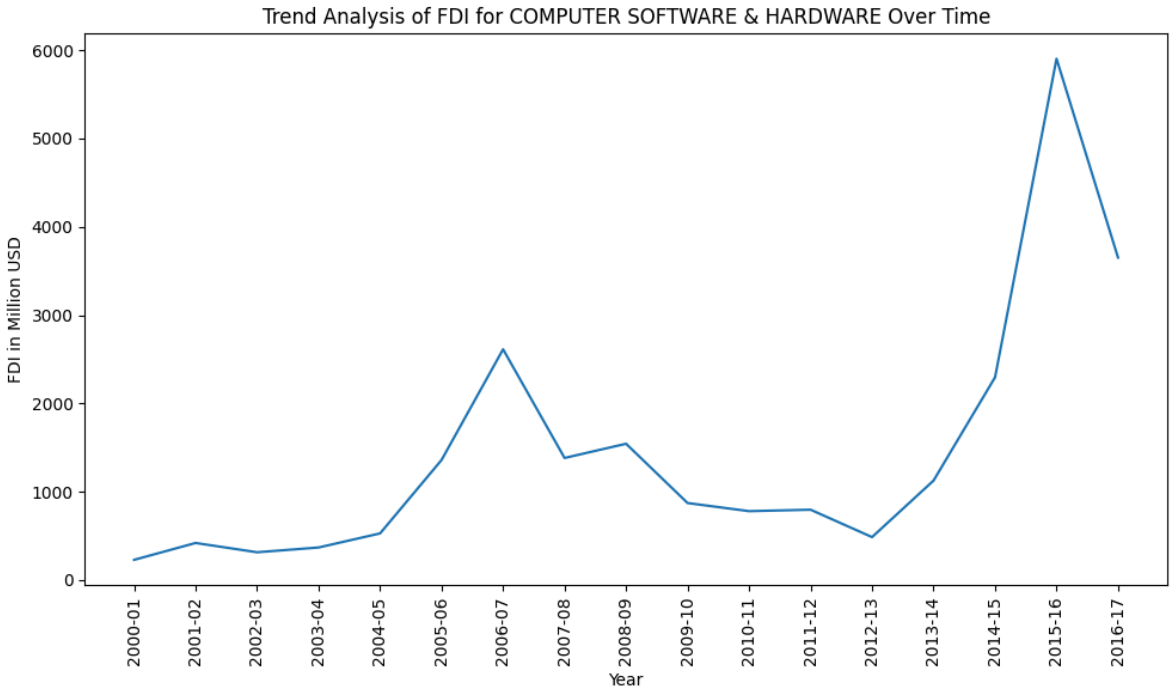

Trend Analysis of FDI for COAL PRODUCTION Over Time
FDI in Million USD
Year
0
2
4
6
8
10
12
14
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17

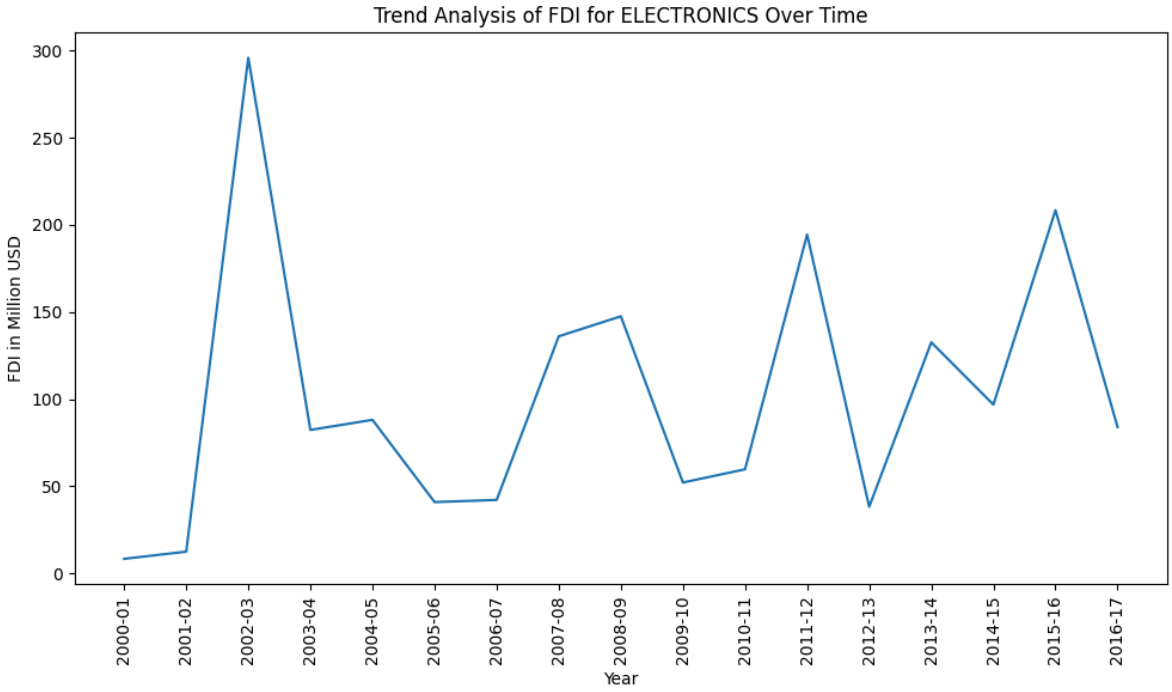

Trend Analysis of FDI for PETROLEUM & NATURAL GAS Over Time
FDI in Million USD
Year
0
250
500
750
1000
1250
1500
1750
2000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17

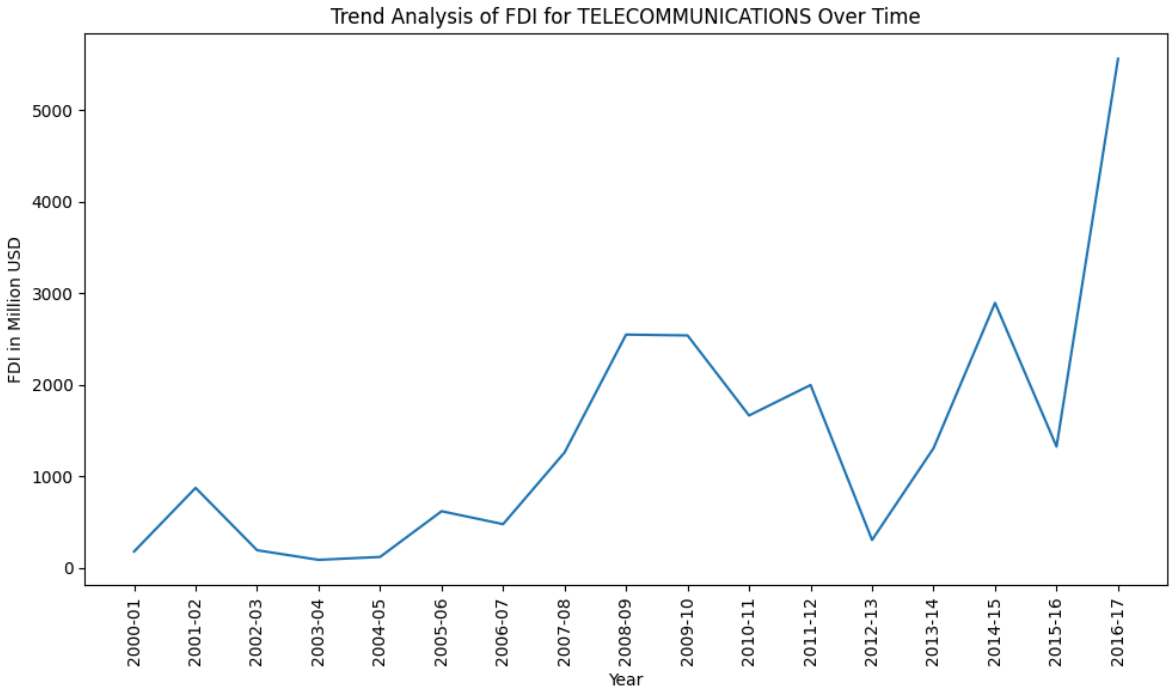

Trend Analysis of FDI for BOILERS AND STEAM GENERATING PLANTS Over Time
FDI in Million USD
Year
0
10
20
30
40
50
60
70
80
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17

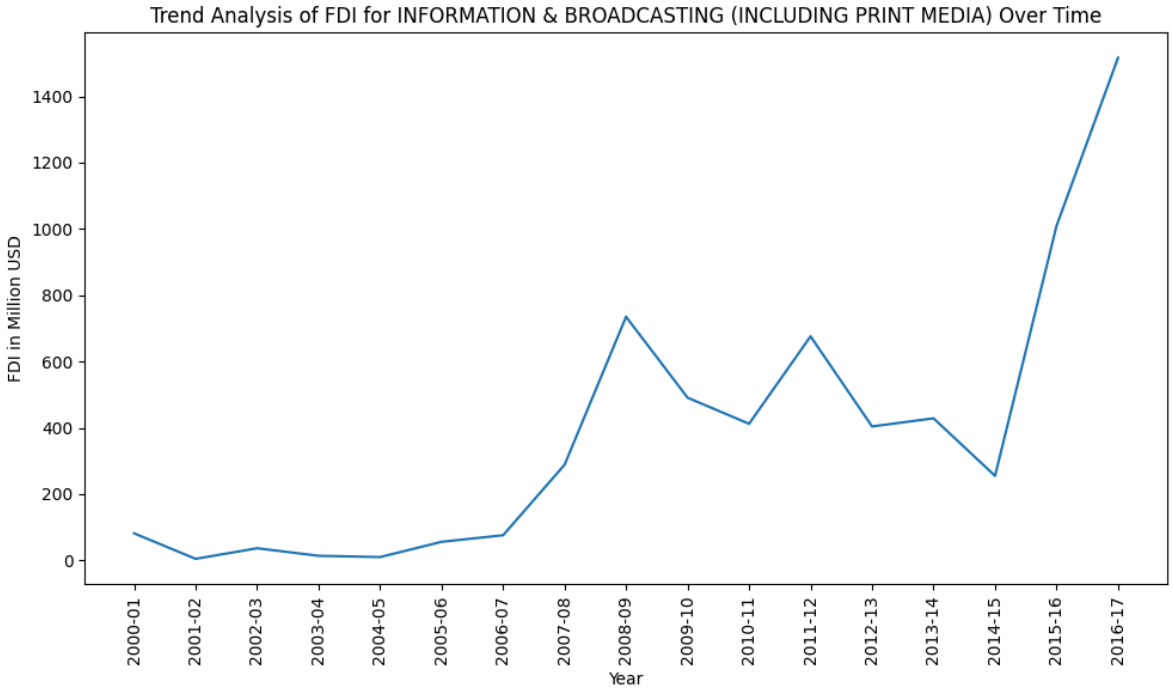

Trend Analysis of FDI for PRIME MOVER (OTHER THAN ELECTRICAL GENERATORS) Over Time
FDI in Million USD
Year
0
50
100
150
200
250
300
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17

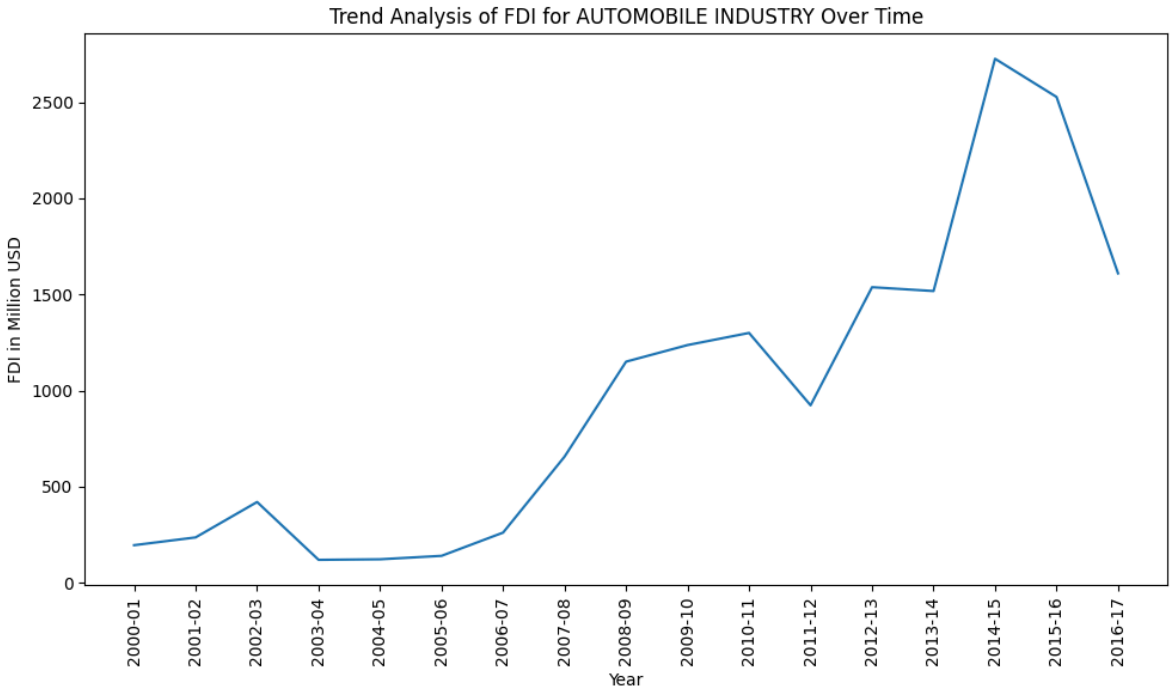

Trend Analysis of FDI for ELECTRICAL EQUIPMENTS Over Time
FDI in Million USD
0
500
1000
1500
2000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

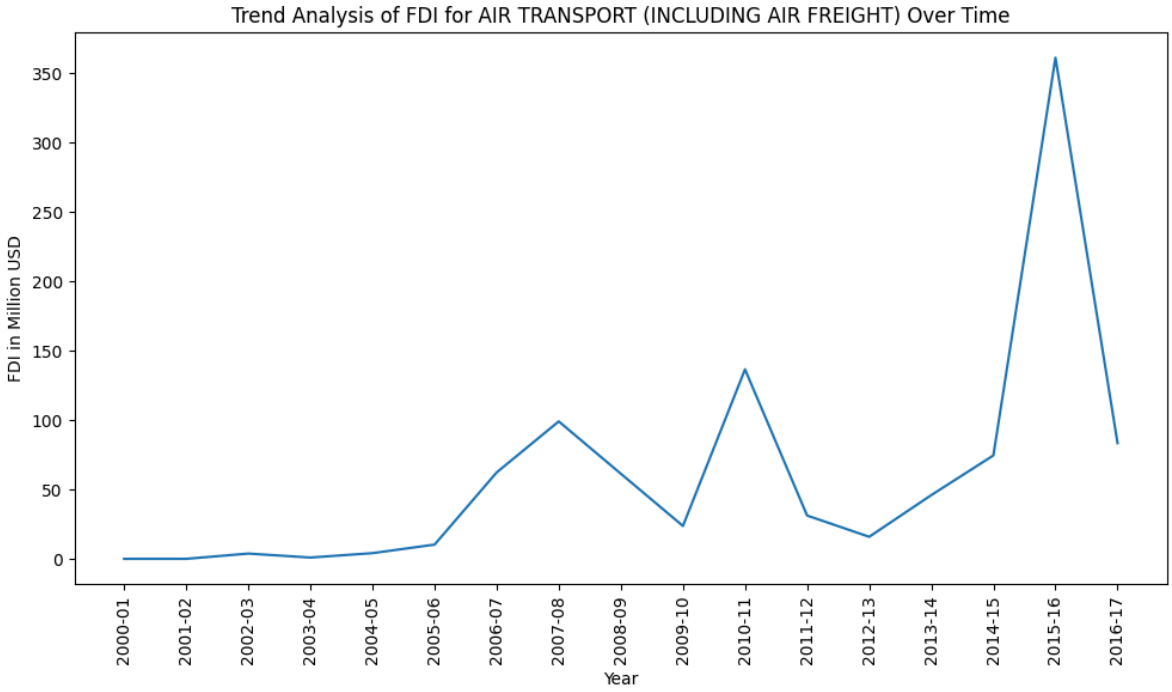

Trend Analysis of FDI for COMPUTER SOFTWARE & HARDWARE Over Time
FDI in Million USD
0
1000
2000
3000
4000
5000
6000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

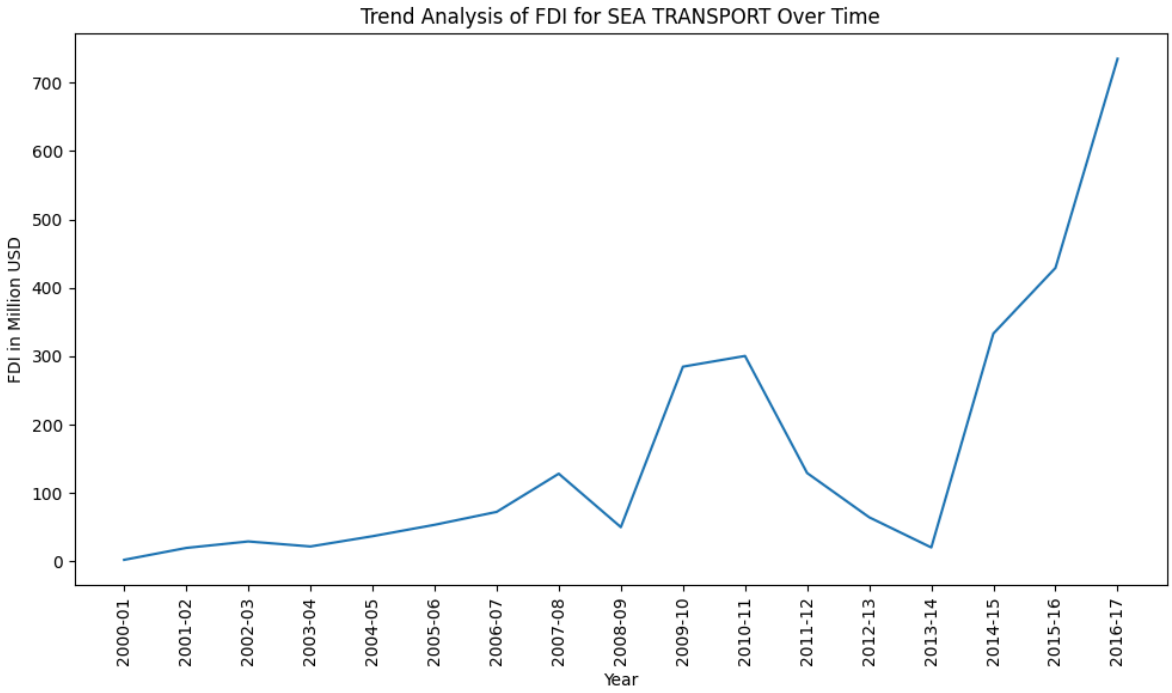

Trend Analysis of FDI for ELECTRONICS Over Time
FDI in Million USD
0
50
100
150
200
250
300
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

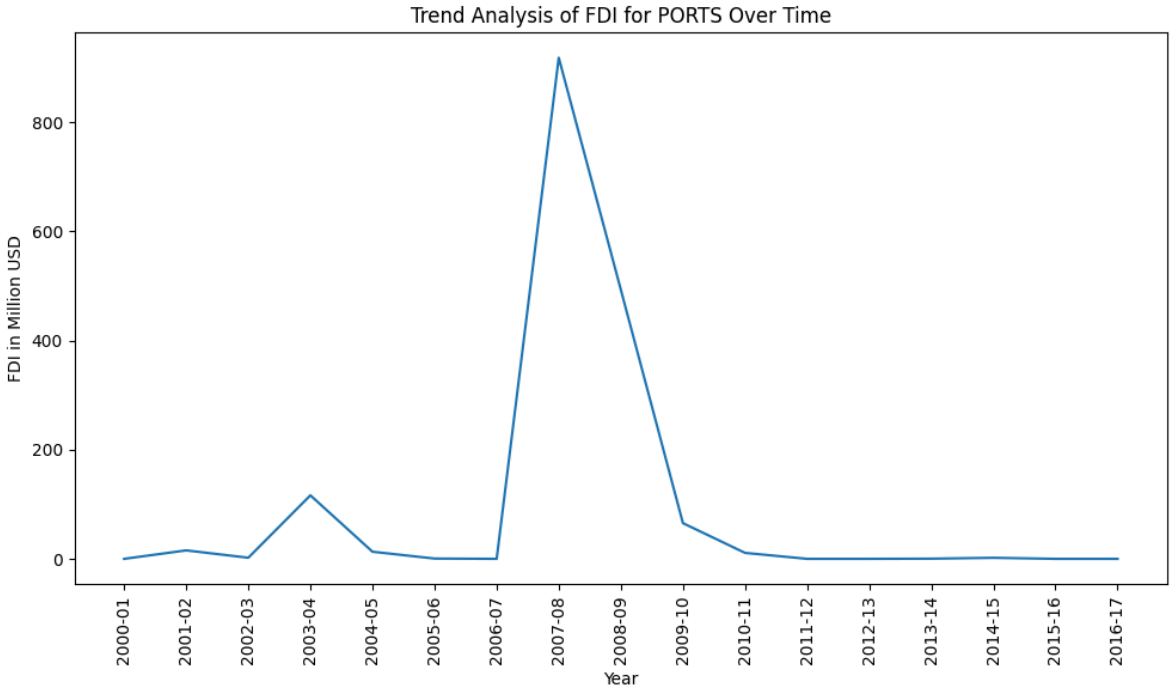

Trend Analysis of FDI for TELECOMMUNICATIONS Over Time
FDI in Million USD
0
1000
2000
3000
4000
5000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

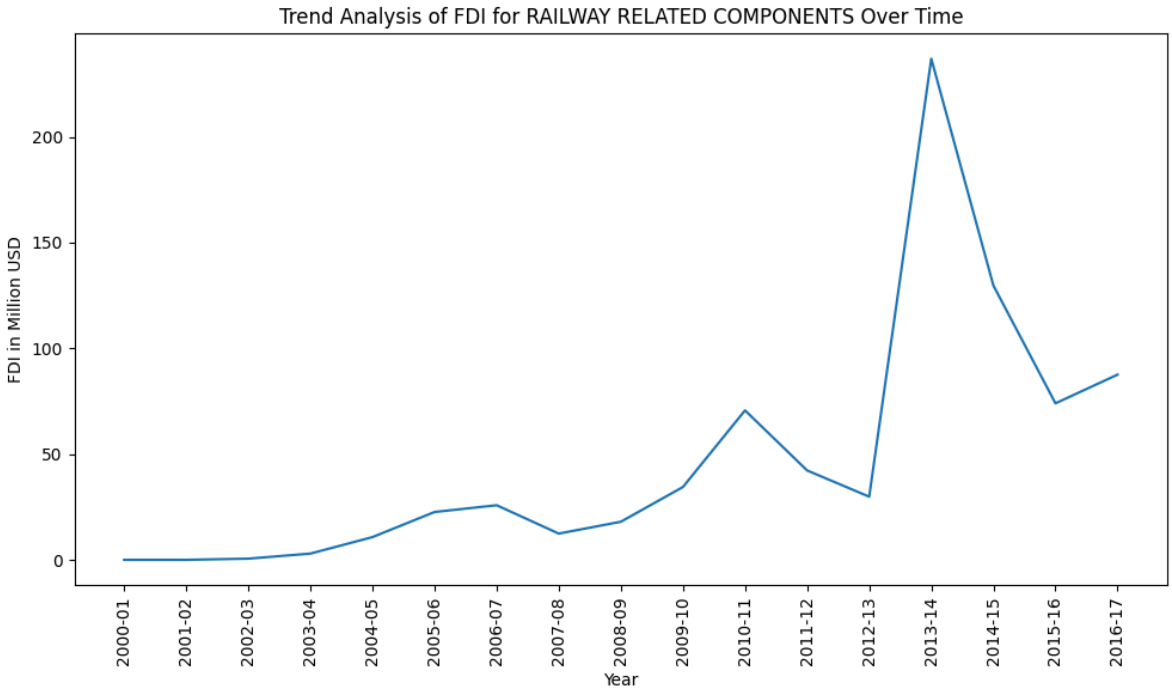

Trend Analysis of FDI for INFORMATION & BROADCASTING (INCLUDING PRINT MEDIA) Over Time
FDI in Million USD
0
200
400
600
800
1000
1200
1400
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

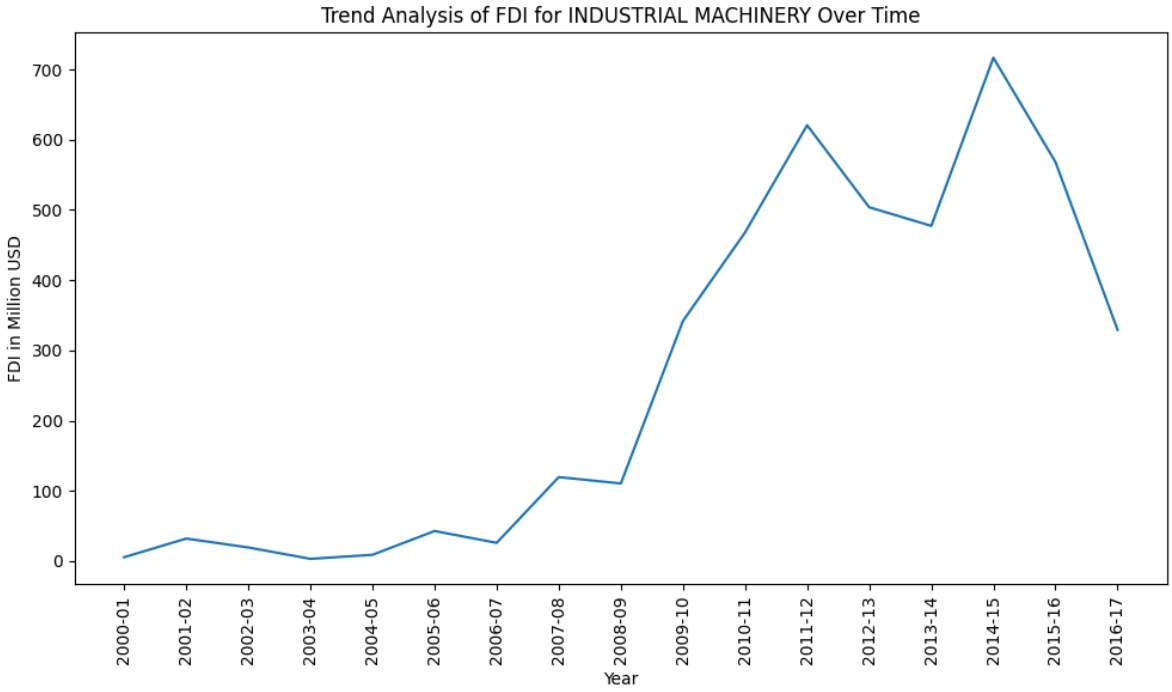

Trend Analysis of FDI for AUTOMOBILE INDUSTRY Over Time
FDI in Million USD
0
500
1000
1500
2000
2500
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

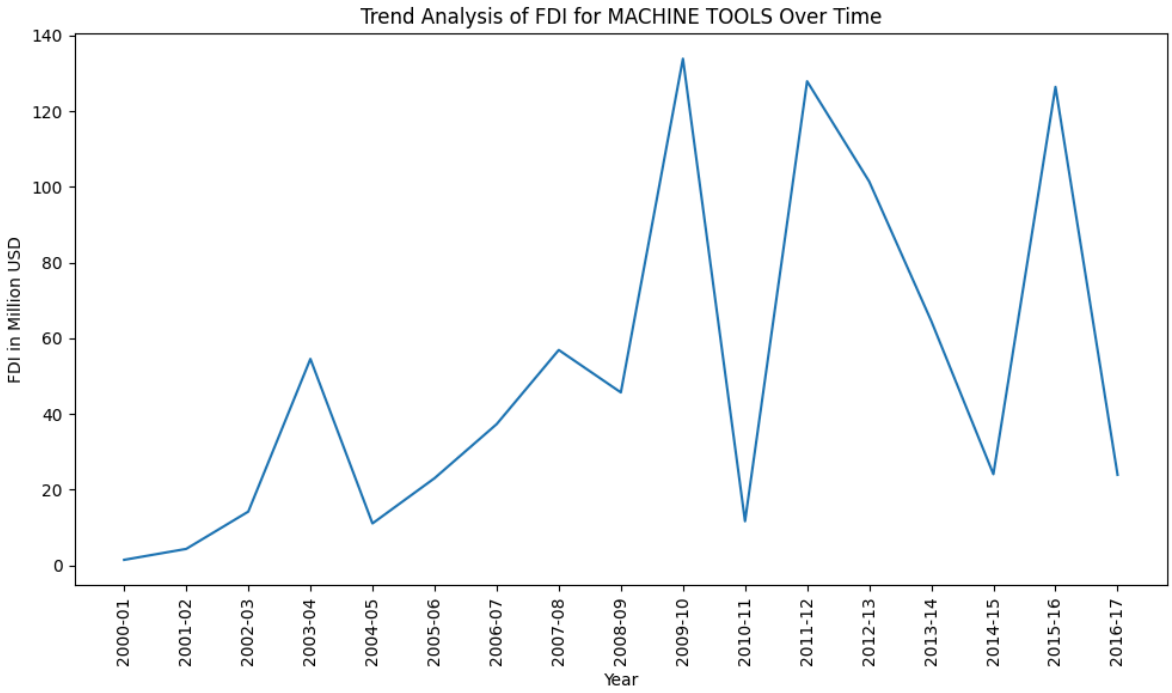

Trend Analysis of FDI for AIR TRANSPORT (INCLUDING AIR FREIGHT) Over Time
FDI in Million USD
0
50
100
150
200
250
300
350
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

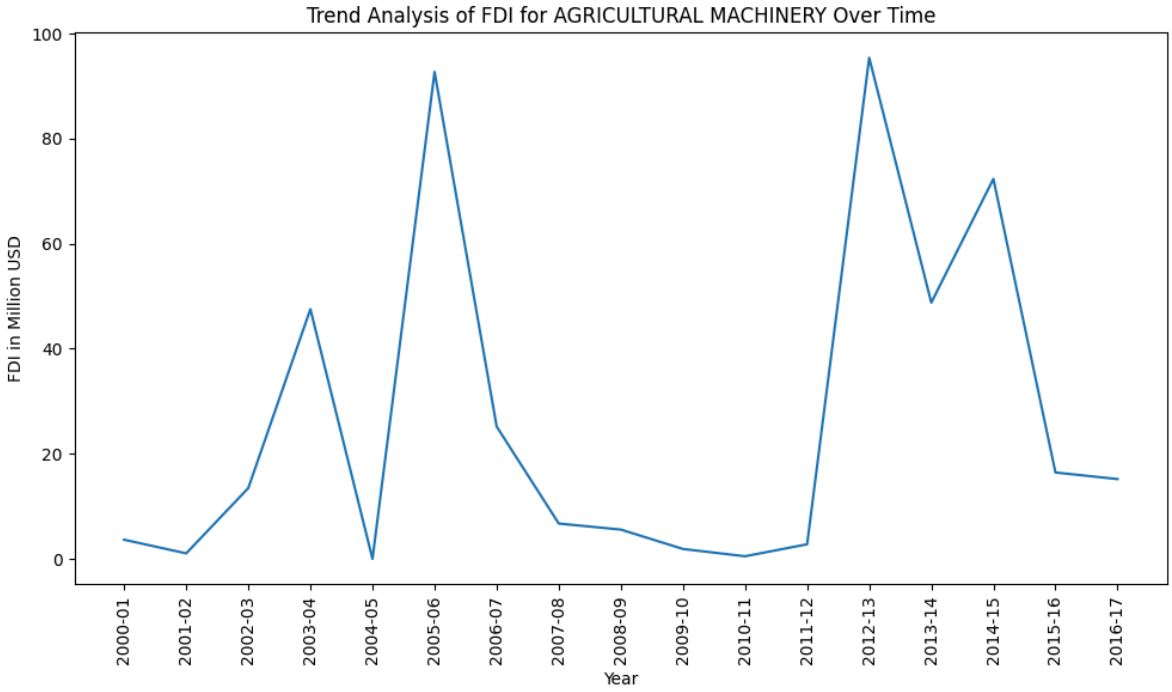

Trend Analysis of FDI for SEA TRANSPORT Over Time
FDI in Million USD
0
100
200
300
400
500
600
700
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

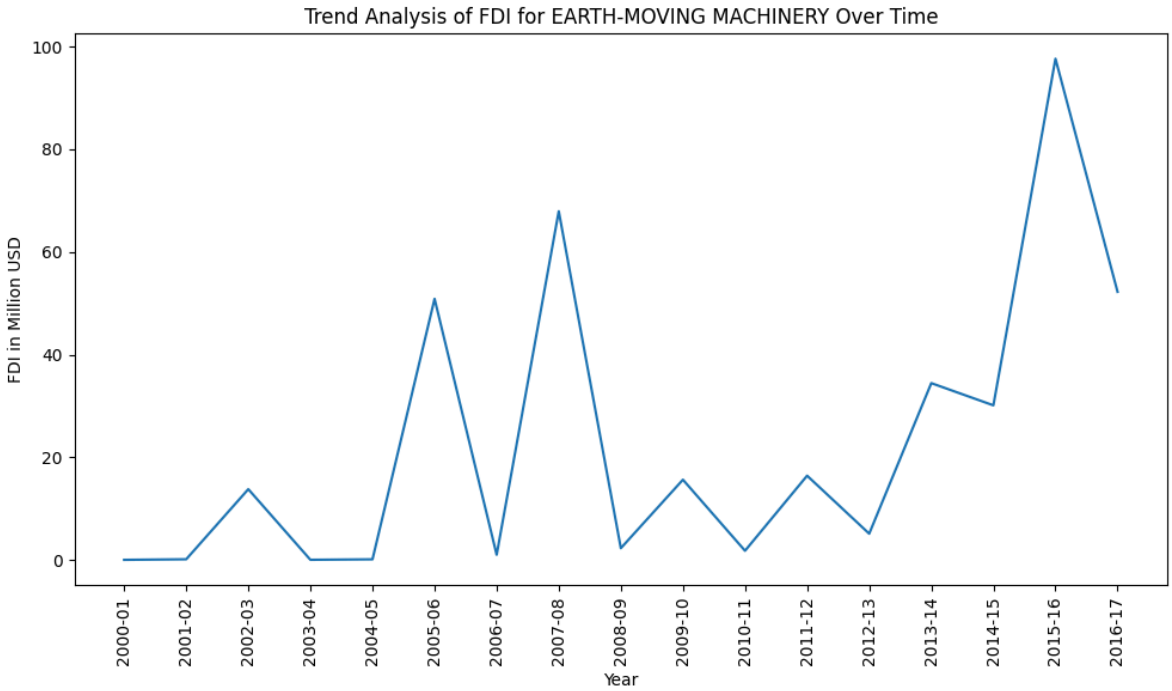

Trend Analysis of FDI for PORTS Over Time
FDI in Million USD
0
200
400
600
800
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

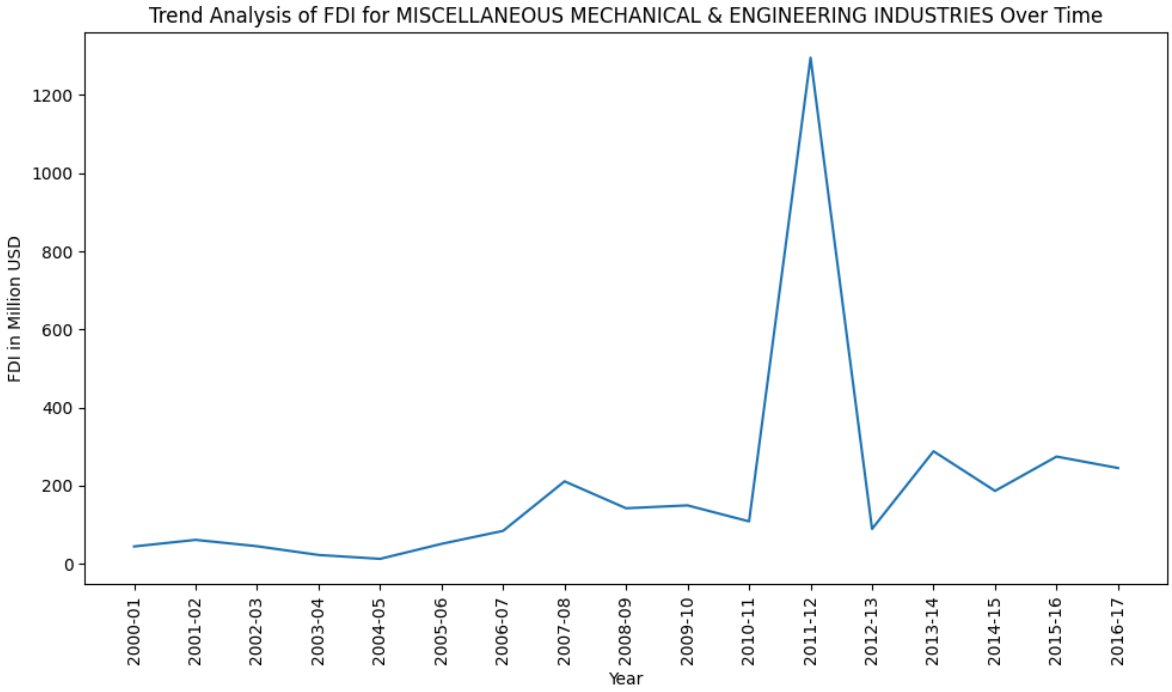

Trend Analysis of FDI for RAILWAY RELATED COMPONENTS Over Time
FDI in Million USD
0
50
100
150
200
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

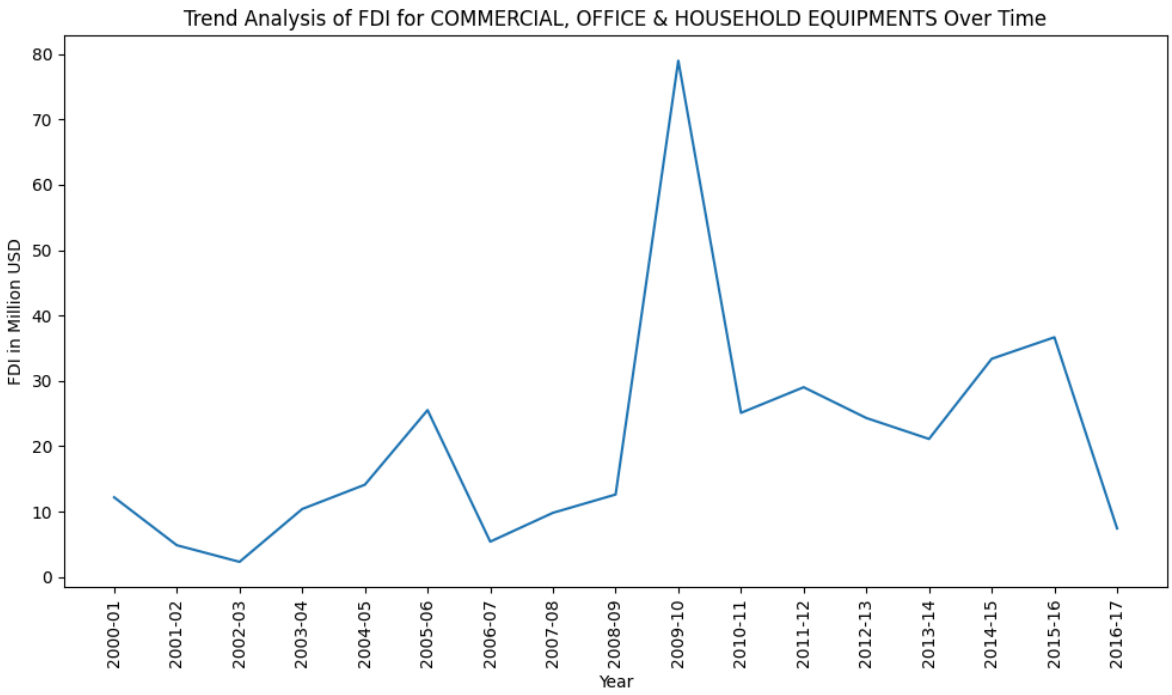

Trend Analysis of FDI for INDUSTRIAL MACHINERY Over Time
FDI in Million USD
0
100
200
300
400
500
600
700
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

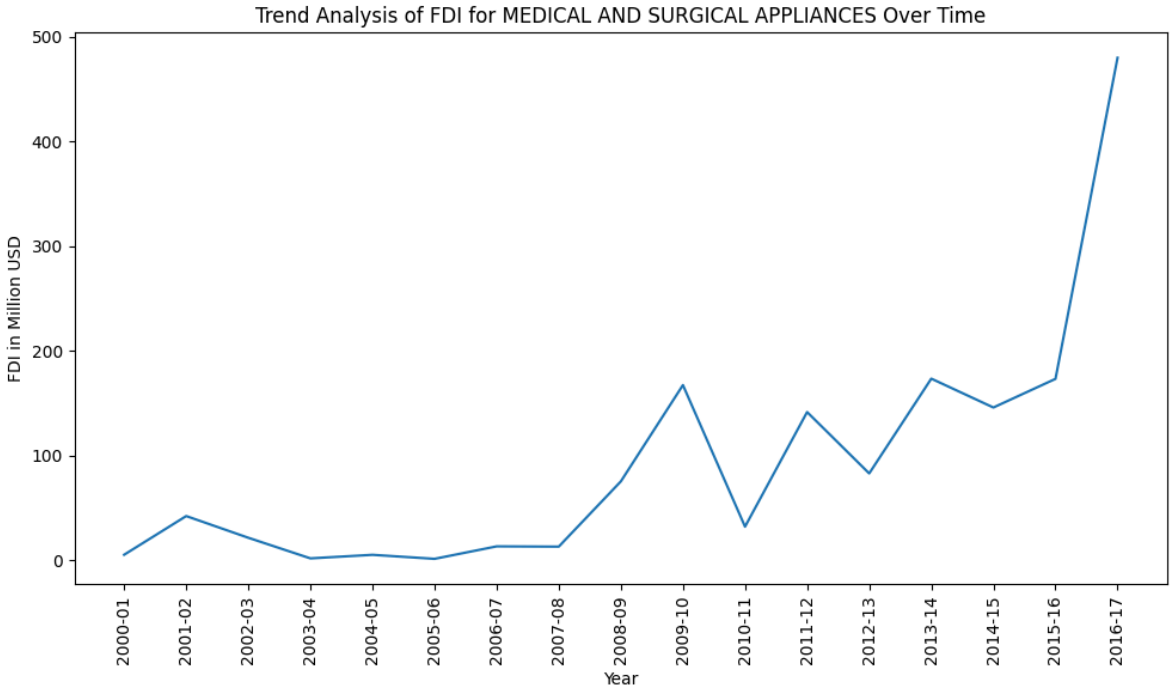

Trend Analysis of FDI for MACHINE TOOLS Over Time
FDI in Million USD
0
20
40
60
80
100
120
140
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

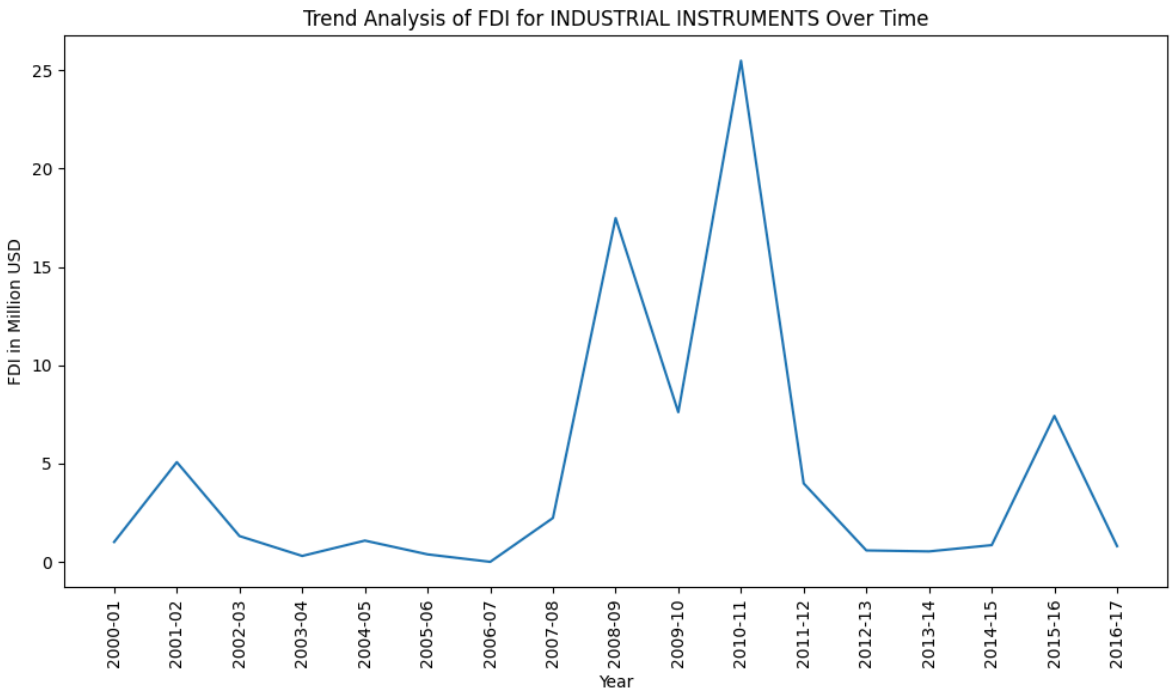

Trend Analysis of FDI for AGRICULTURAL MACHINERY Over Time
FDI in Million USD
Year
0
20
40
60
80
100
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17

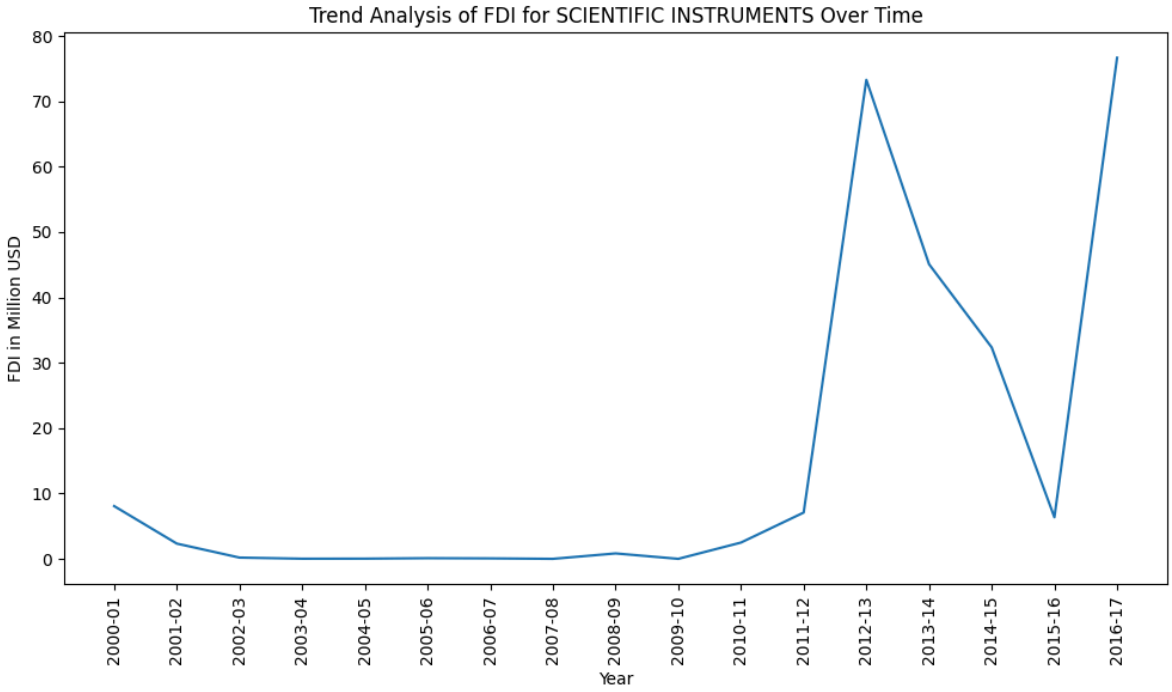

Trend Analysis of FDI for EARTH-MOVING MACHINERY Over Time
FDI in Million USD
Year
0
20
40
60
80
100
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17

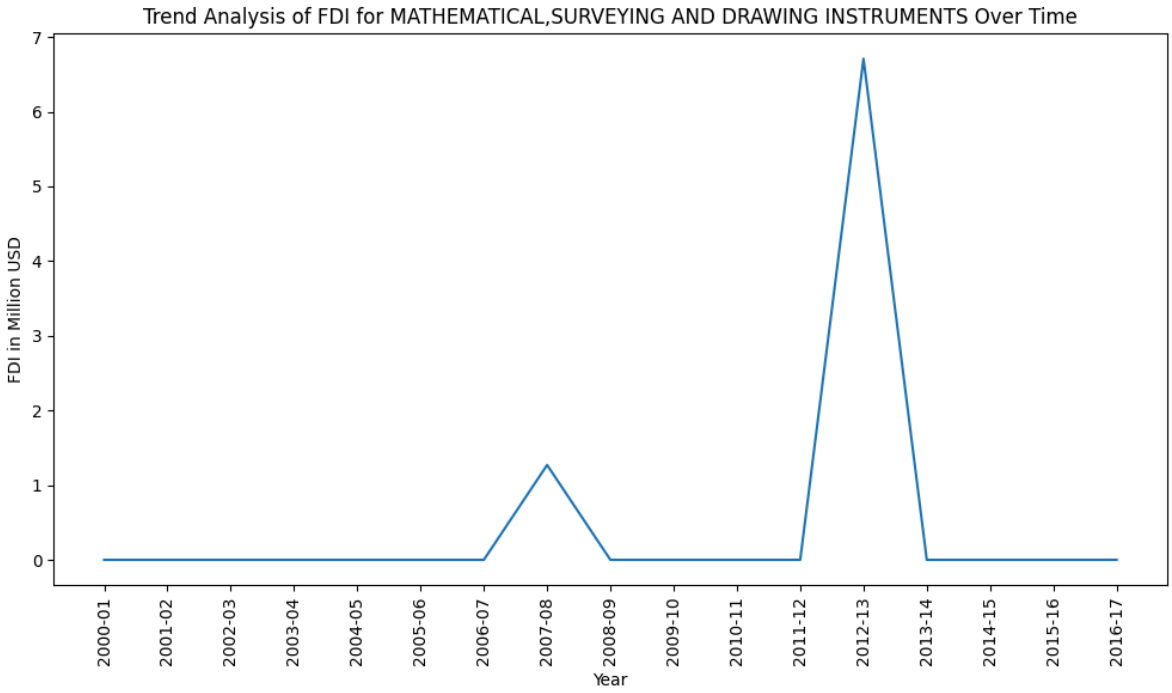

Trend Analysis of FDI for MISCELLANEOUS MECHANICAL & ENGINEERING INDUSTRIES Over Time
FDI in Million USD
0
200
400
600
800
1000
1200
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

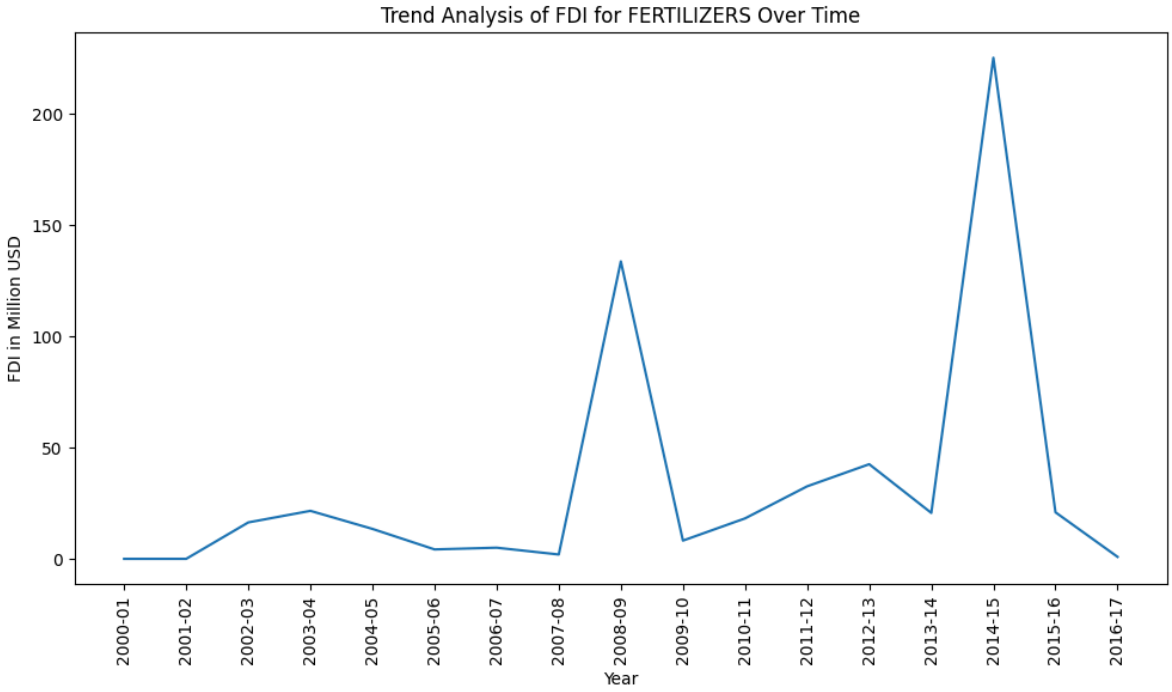

Trend Analysis of FDI for COMMERCIAL, OFFICE & HOUSEHOLD EQUIPMENTS Over Time
FDI in Million USD
0
10
20
30
40
50
60
70
80
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

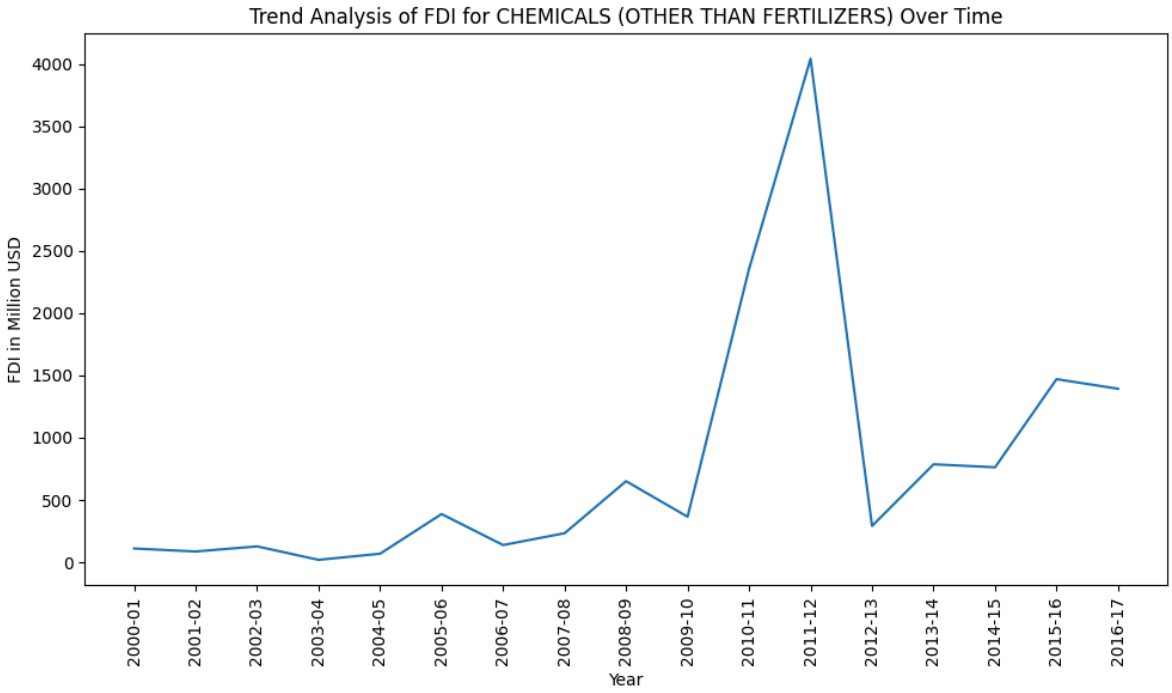

Trend Analysis of FDI for MEDICAL AND SURGICAL APPLIANCES Over Time
FDI in Million USD
0
100
200
300
400
500
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

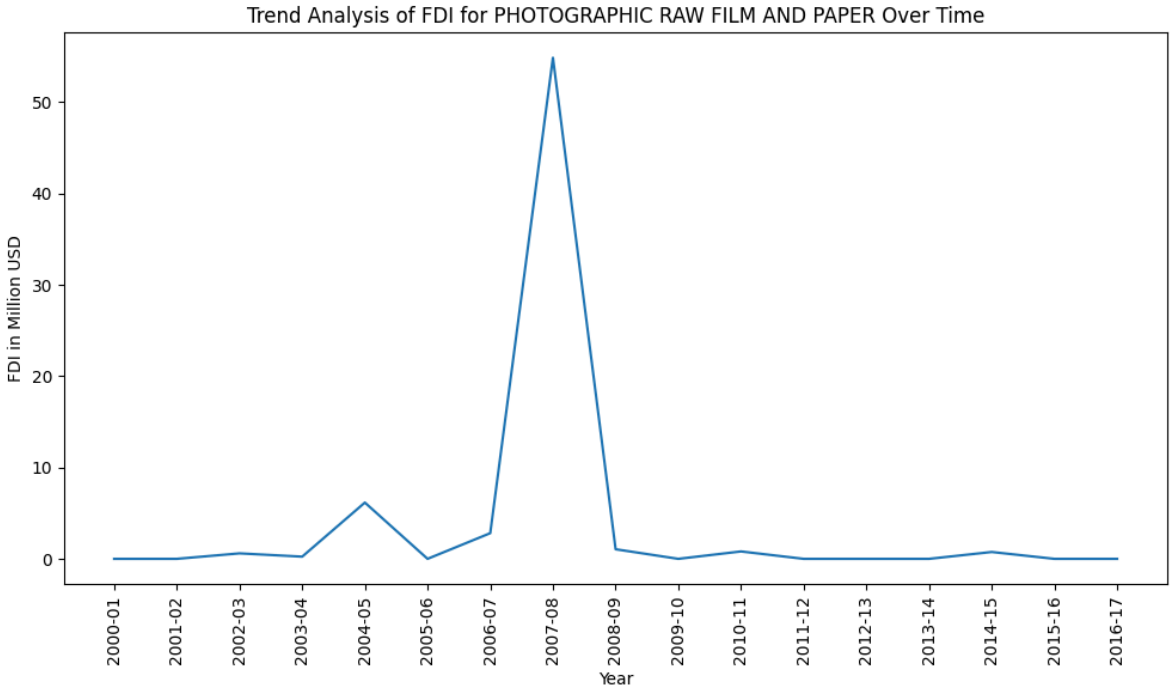

Trend Analysis of FDI for INDUSTRIAL INSTRUMENTS Over Time
FDI in Million USD
0
5
10
15
20
25
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

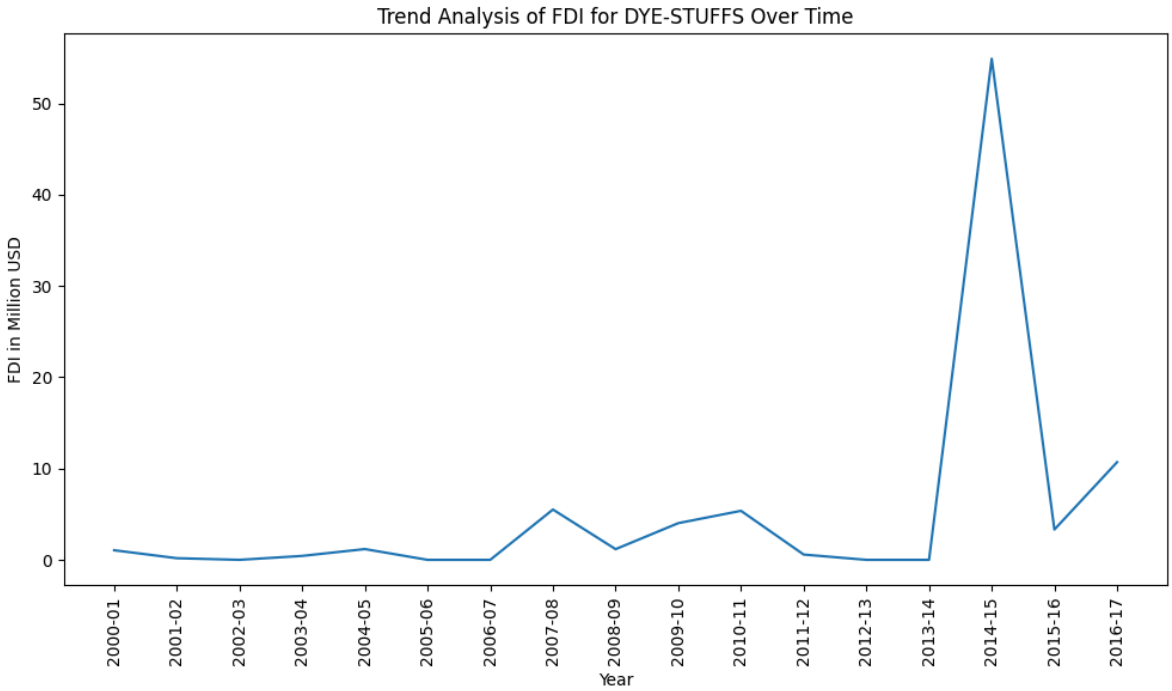

Trend Analysis of FDI for SCIENTIFIC INSTRUMENTS Over Time
FDI in Million USD
Year
0
10
20
30
40
50
60
70
80
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17

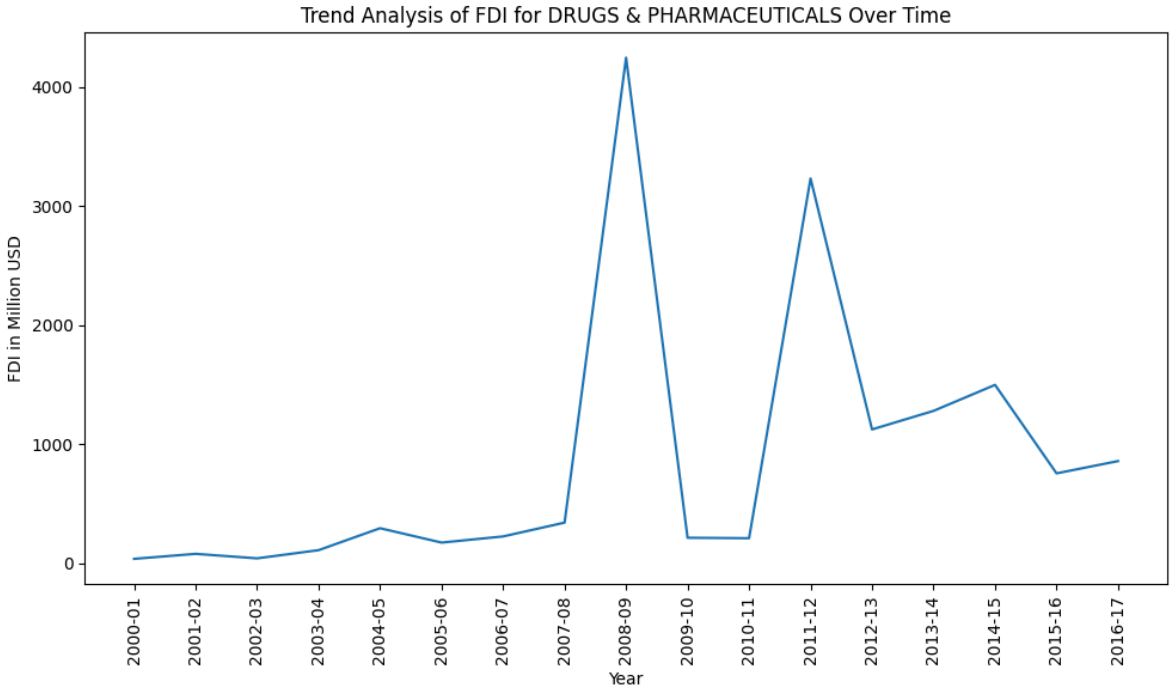

Trend Analysis of FDI for MATHEMATICAL,SURVEYING AND DRAWING INSTRUMENTS Over Time
FDI in Million USD
Year
0
1
2
3
4
5
6
7
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17

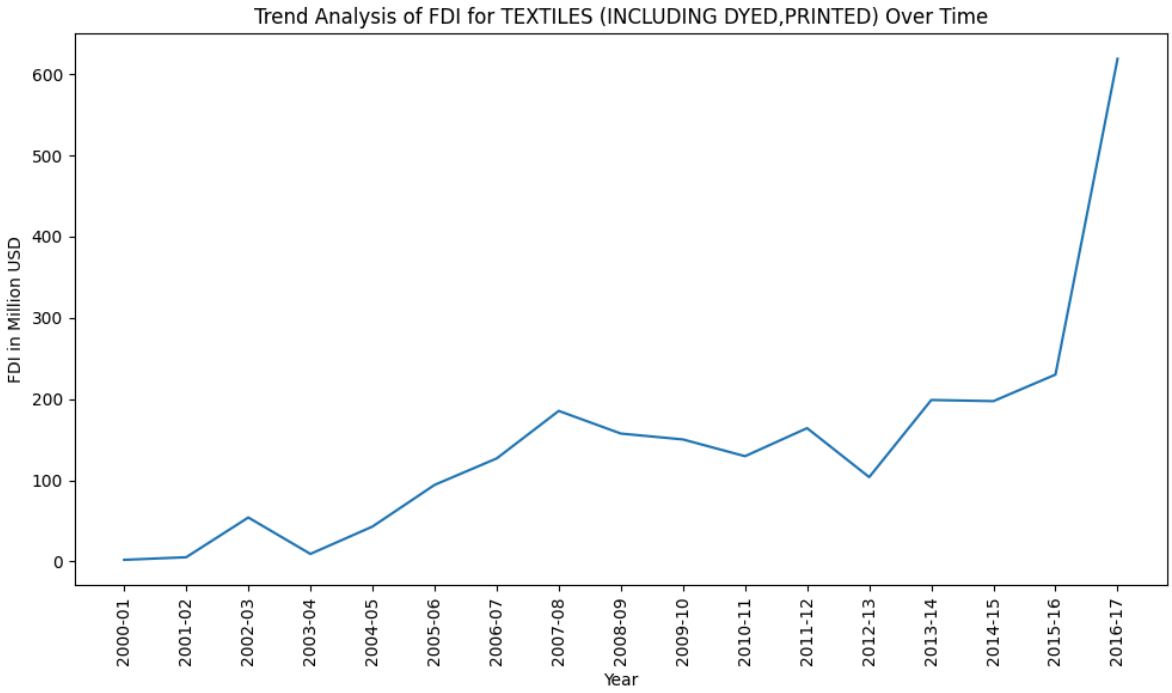

Trend Analysis of FDI for FERTILIZERS Over Time
FDI in Million USD
0
50
100
150
200
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

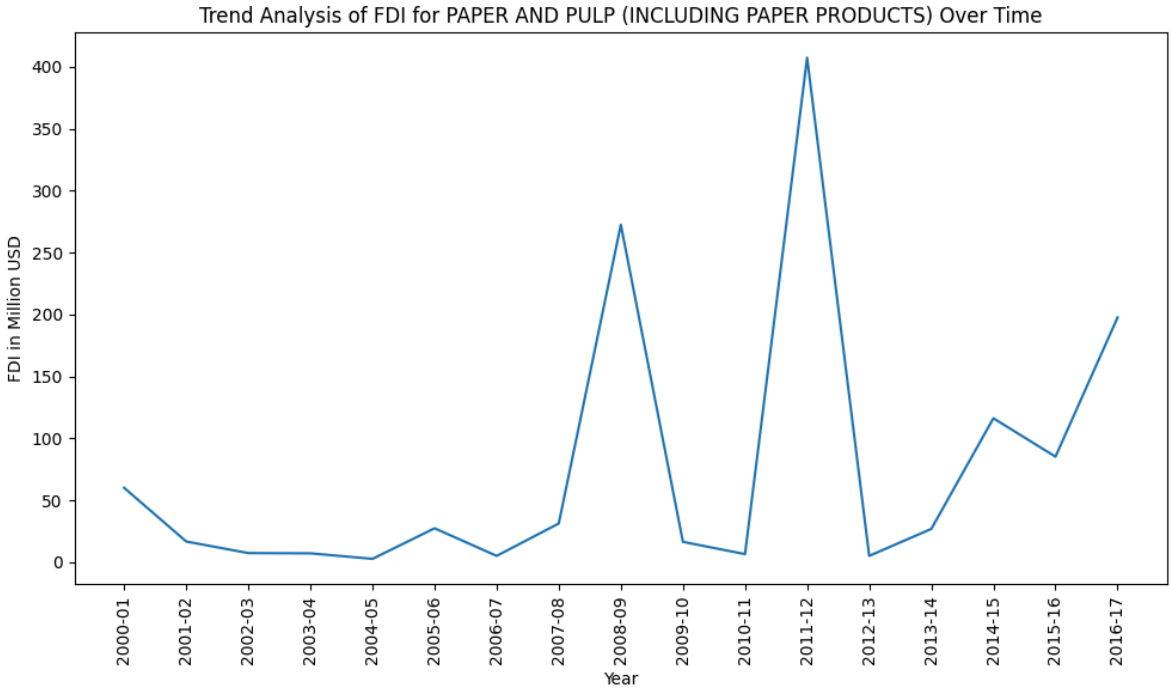

Trend Analysis of FDI for CHEMICALS (OTHER THAN FERTILIZERS) Over Time
FDI in Million USD
0
500
1000
1500
2000
2500
3000
3500
4000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

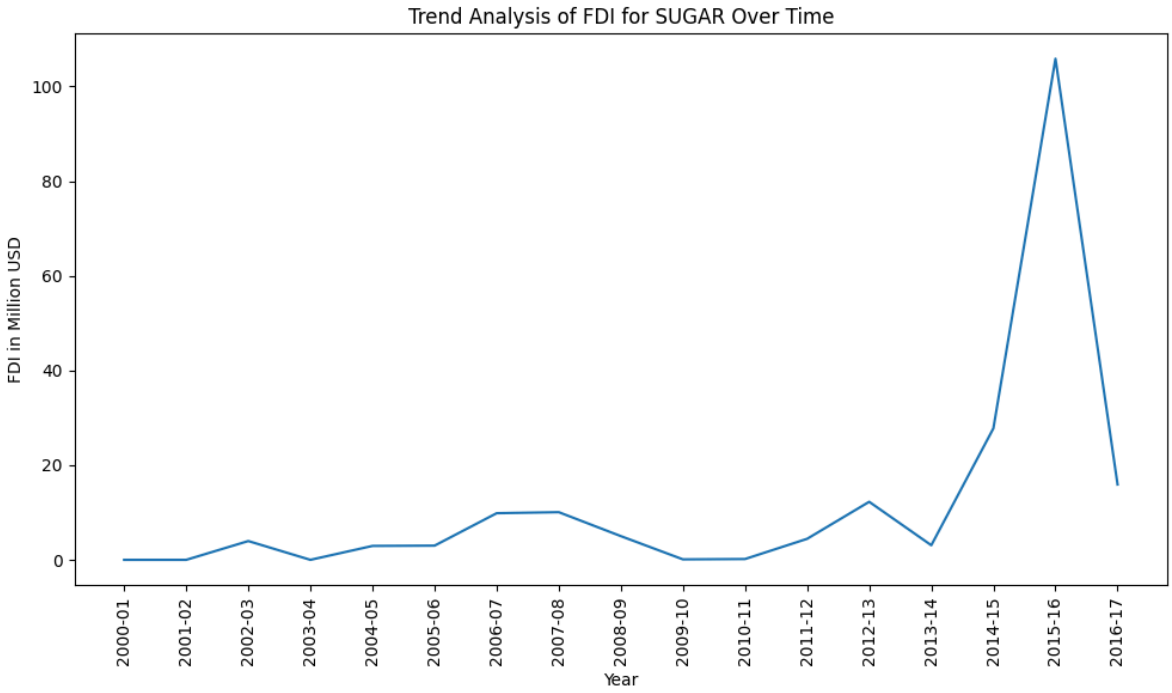

Trend Analysis of FDI for PHOTOGRAPHIC RAW FILM AND PAPER Over Time
FDI in Million USD
0
10
20
30
40
50
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

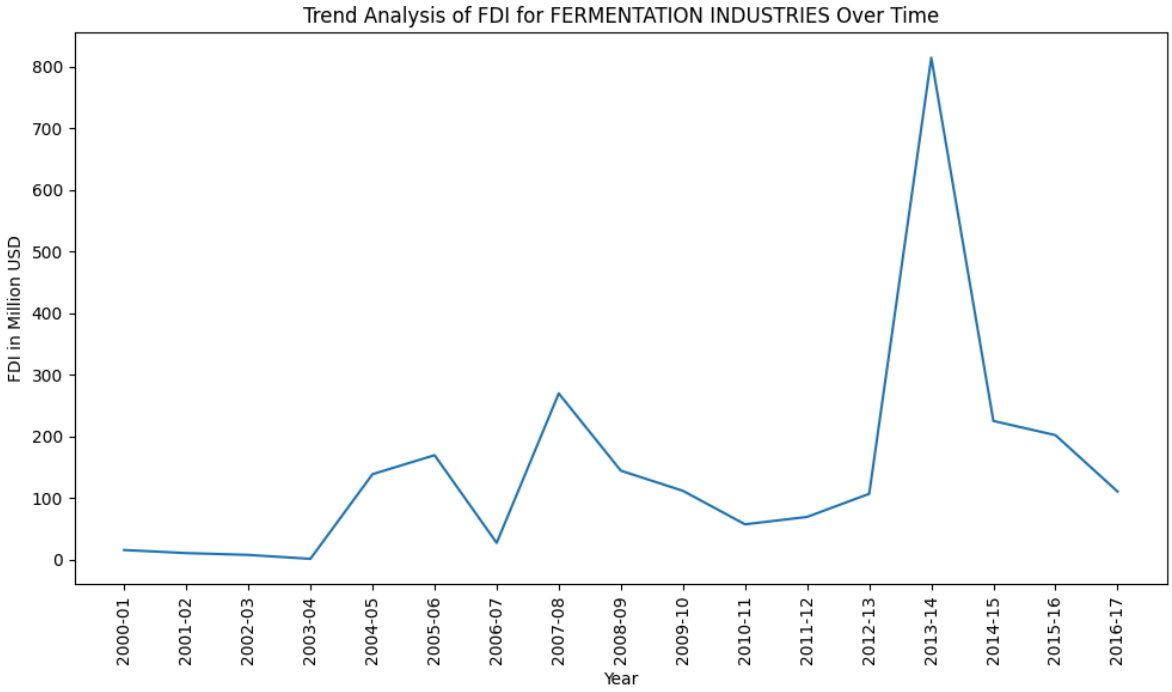

Trend Analysis of FDI for DYE-STUFFS Over Time
FDI in Million USD
0
10
20
30
40
50
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

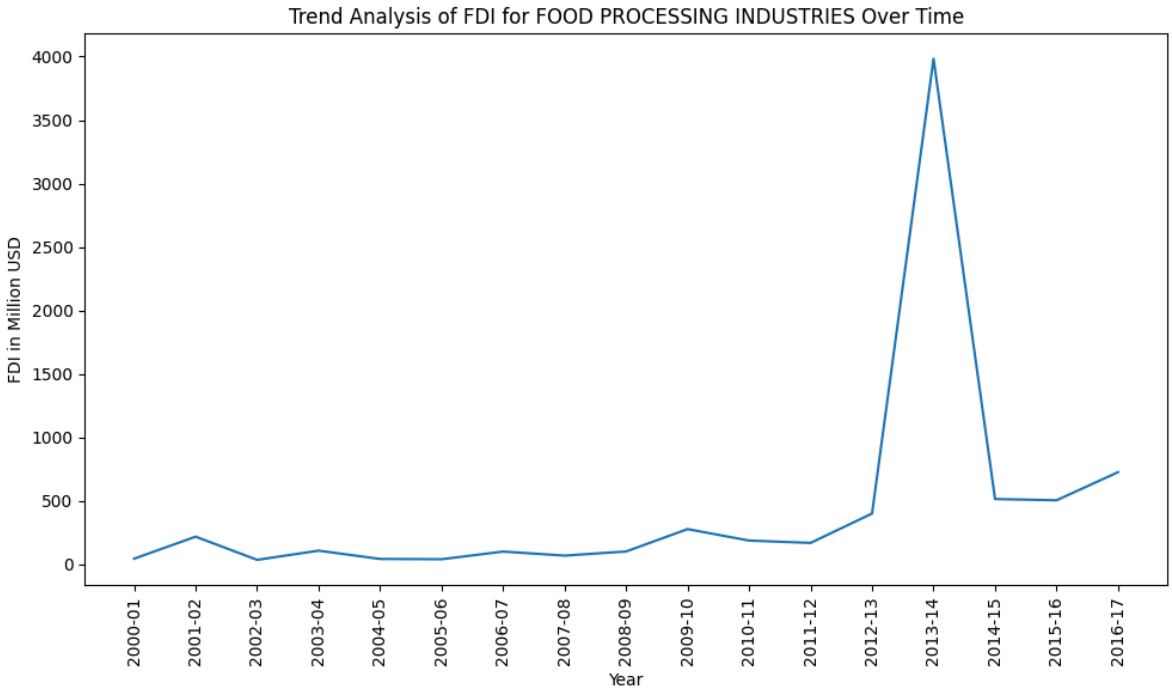

Trend Analysis of FDI for DRUGS & PHARMACEUTICALS Over Time
FDI in Million USD
0
1000
2000
3000
4000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

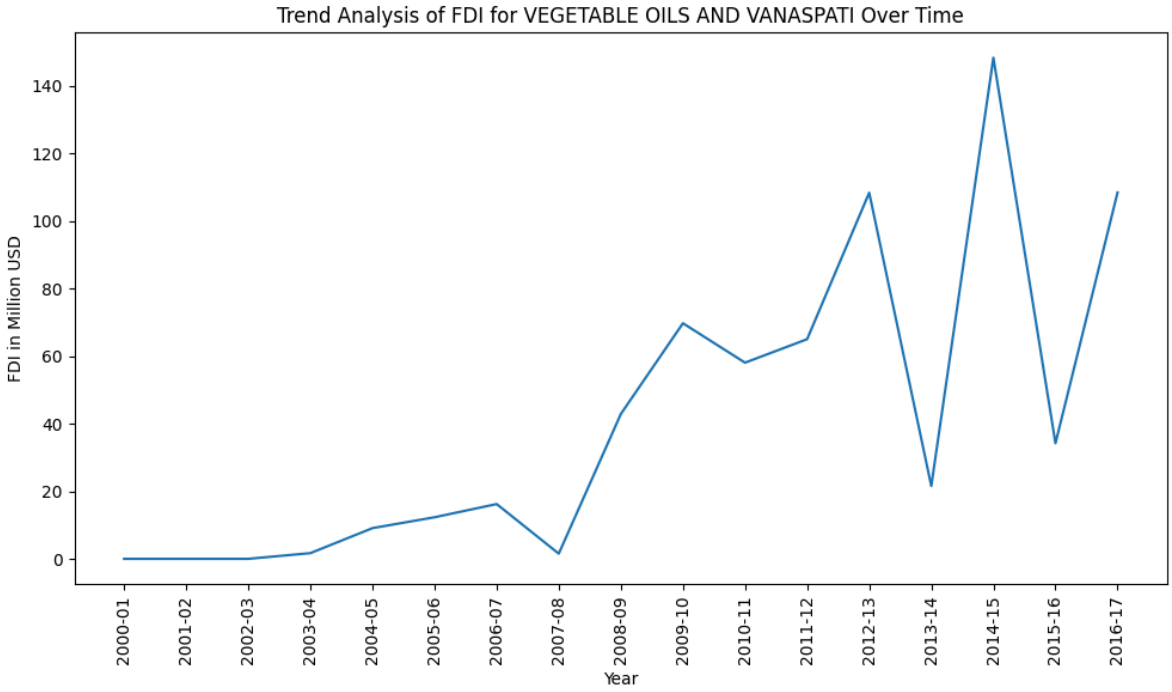

Trend Analysis of FDI for TEXTILES (INCLUDING DYED,PRINTED) Over Time
FDI in Million USD
0
100
200
300
400
500
600
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

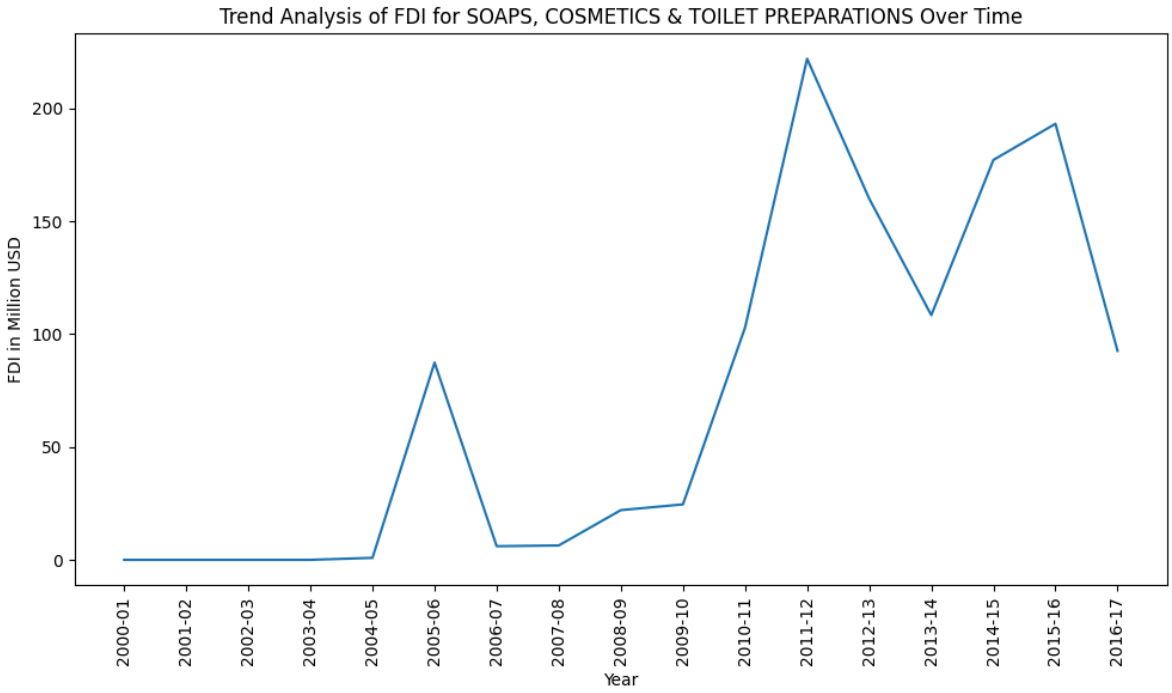

Trend Analysis of FDI for PAPER AND PULP (INCLUDING PAPER PRODUCTS) Over Time
FDI in Million USD
0
50
100
150
200
250
300
350
400
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

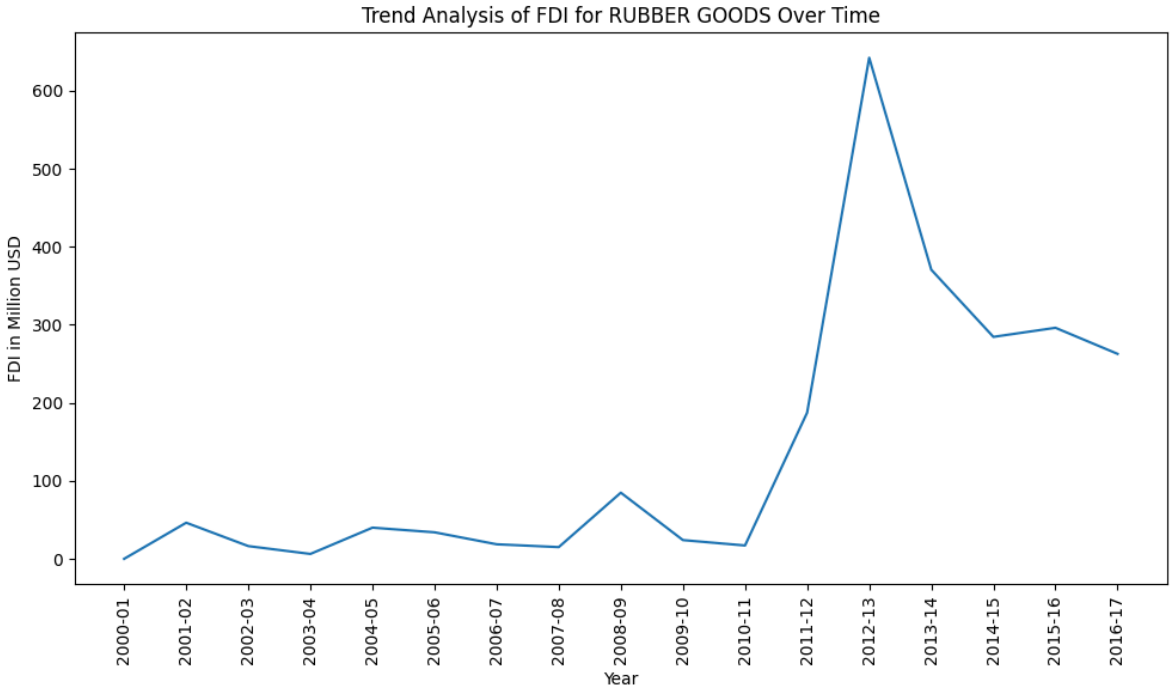

Trend Analysis of FDI for SUGAR Over Time
FDI in Million USD
0
20
40
60
80
100
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

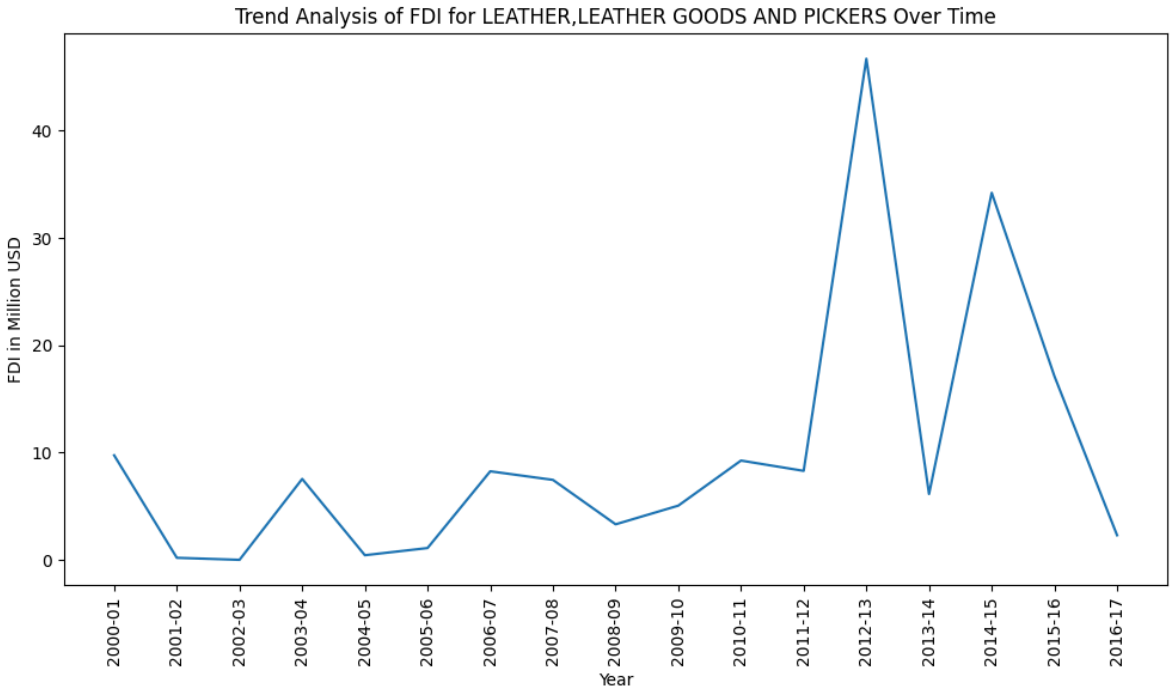

Trend Analysis of FDI for FERMENTATION INDUSTRIES Over Time
FDI in Million USD
0
100
200
300
400
500
600
700
800
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

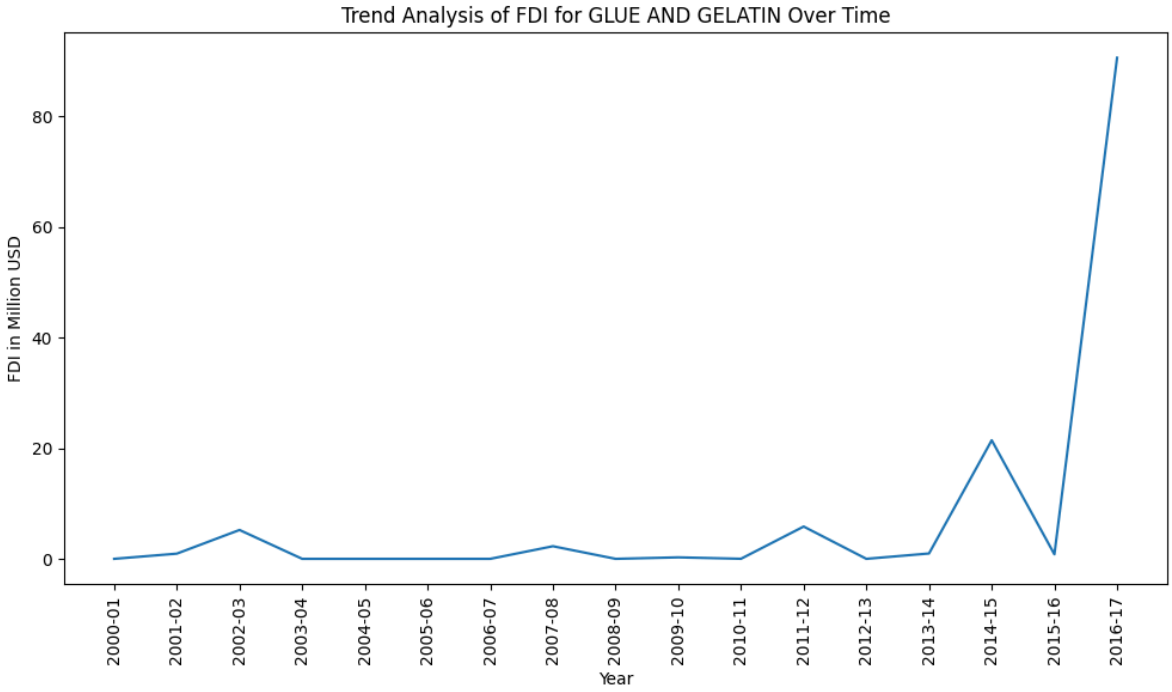

Trend Analysis of FDI for FOOD PROCESSING INDUSTRIES Over Time
FDI in Million USD
0
500
1000
1500
2000
2500
3000
3500
4000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

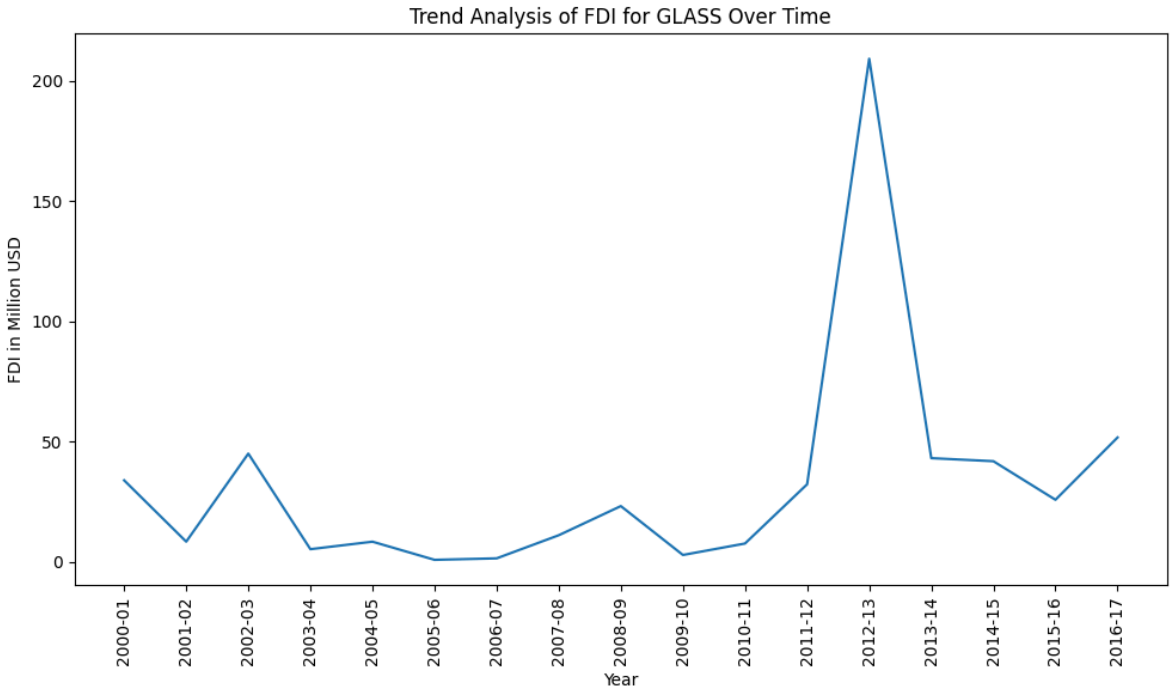

Trend Analysis of FDI for VEGETABLE OILS AND VANASPATI Over Time
FDI in Million USD
0
20
40
60
80
100
120
140
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

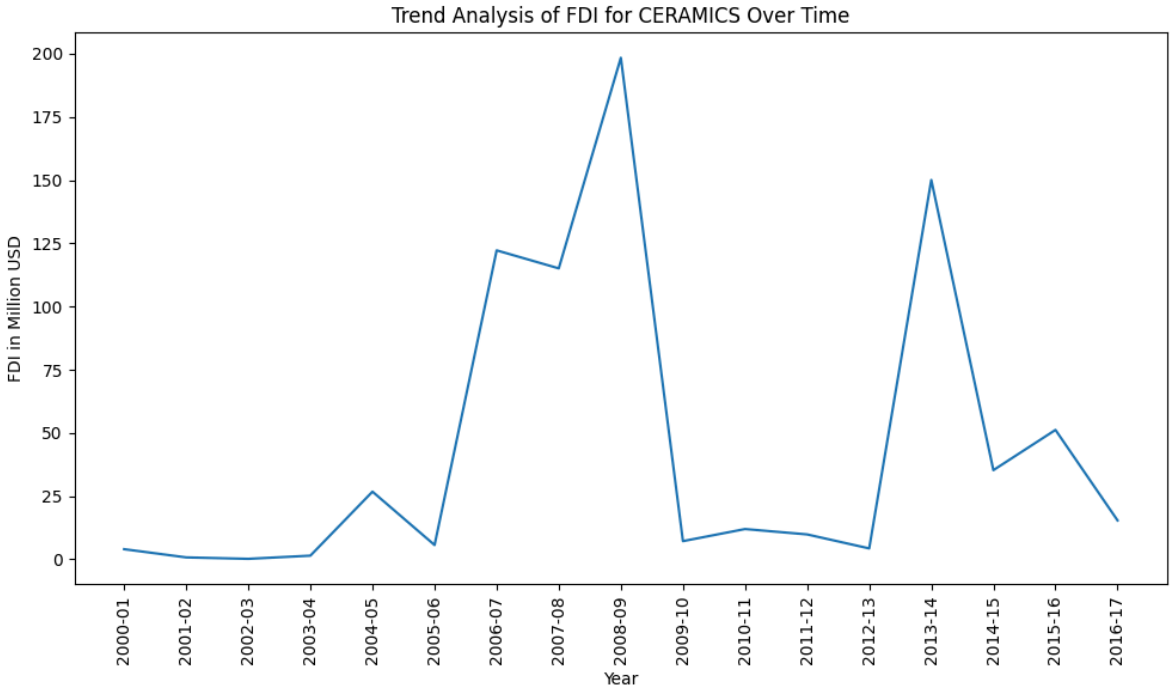

Trend Analysis of FDI for SOAPS, COSMETICS & TOILET PREPARATIONS Over Time
FDI in Million USD
0
50
100
150
200
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

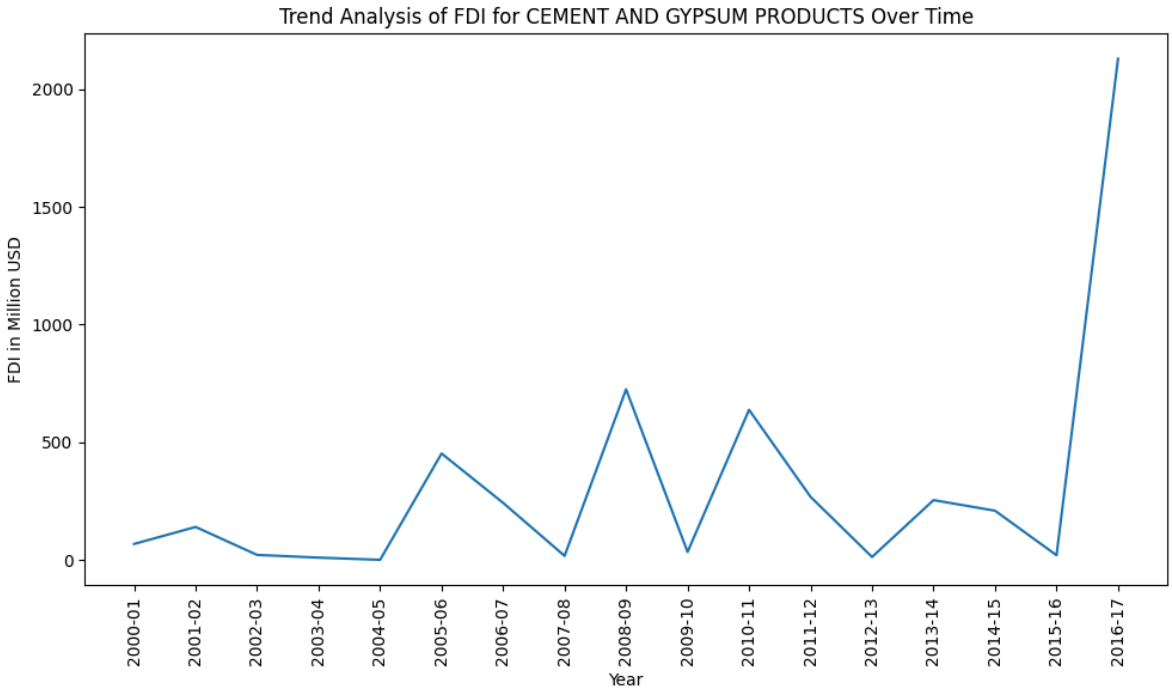

Trend Analysis of FDI for RUBBER GOODS Over Time
FDI in Million USD
0
100
200
300
400
500
600
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

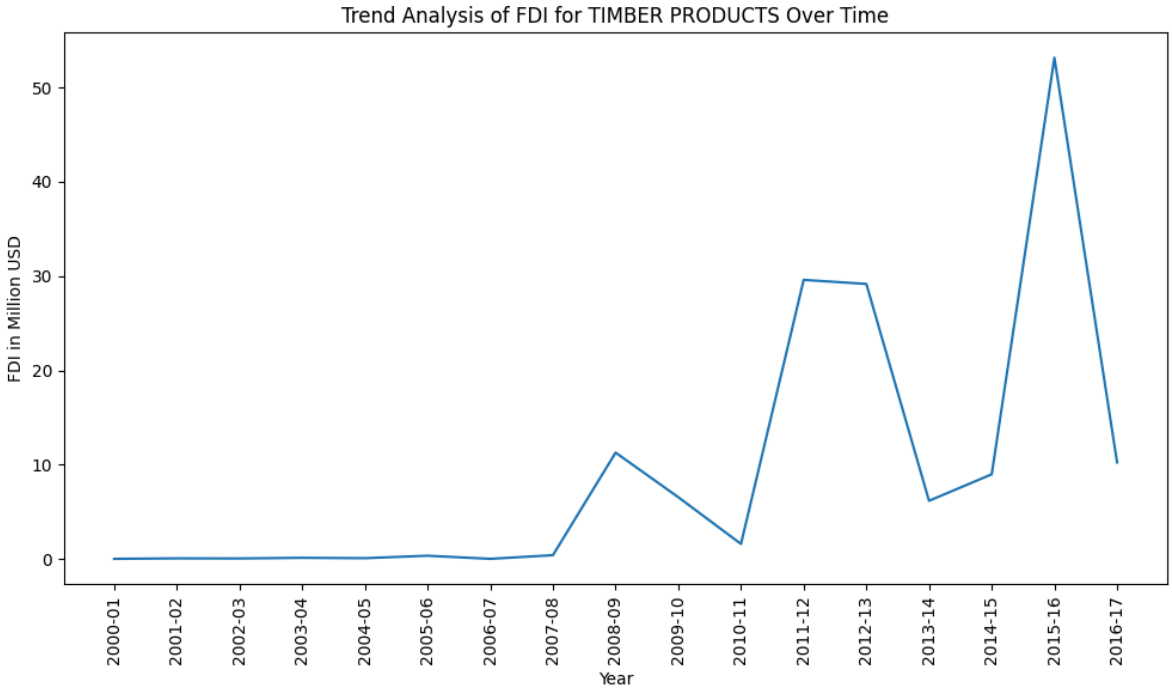

Trend Analysis of FDI for LEATHER,LEATHER GOODS AND PICKERS Over Time
FDI in Million USD
0
10
20
30
40
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

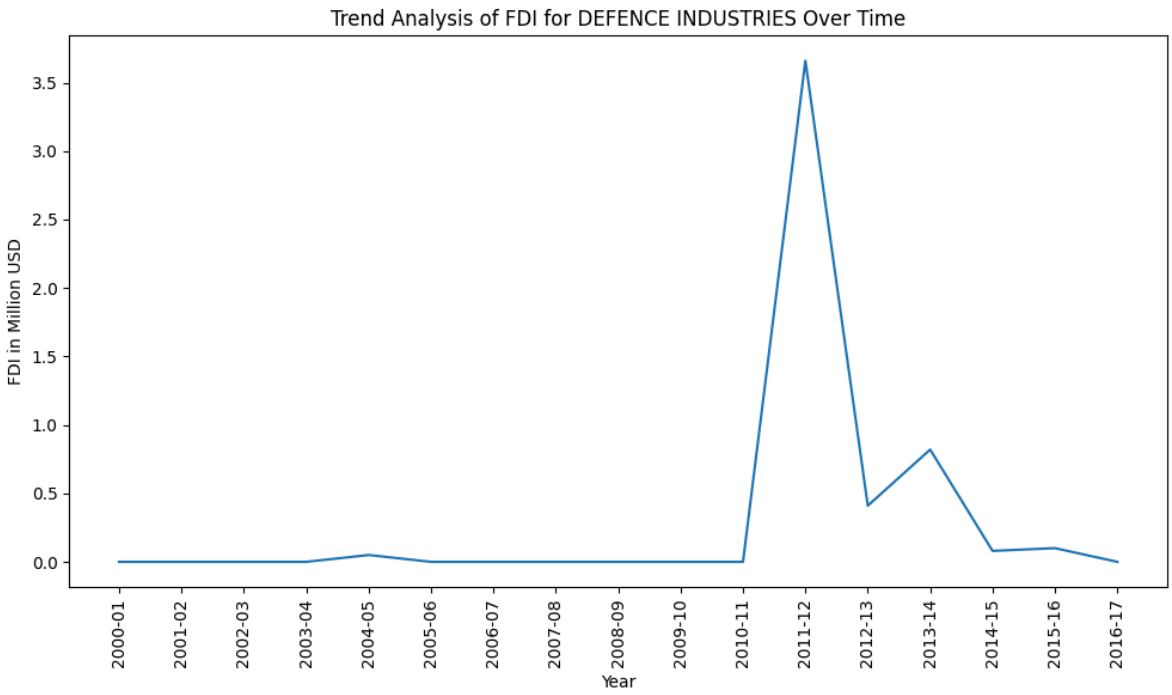

Trend Analysis of FDI for GLUE AND GELATIN Over Time
FDI in Million USD
0
20
40
60
80
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

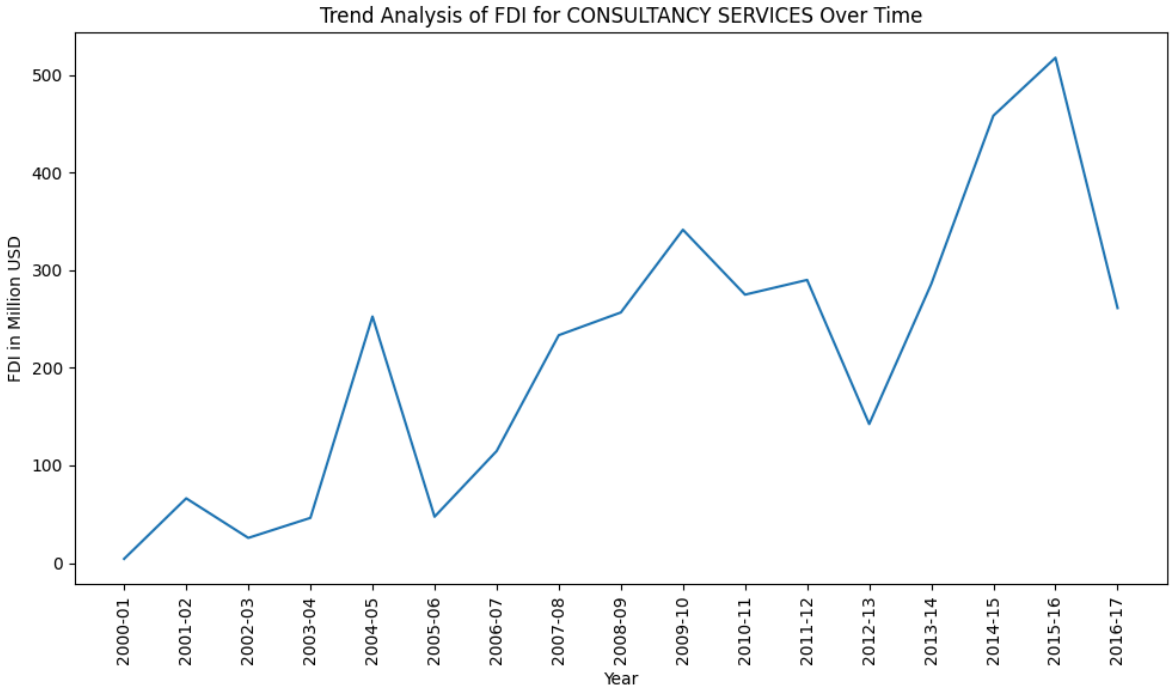

Trend Analysis of FDI for GLASS Over Time
FDI in Million USD
0
50
100
150
200
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

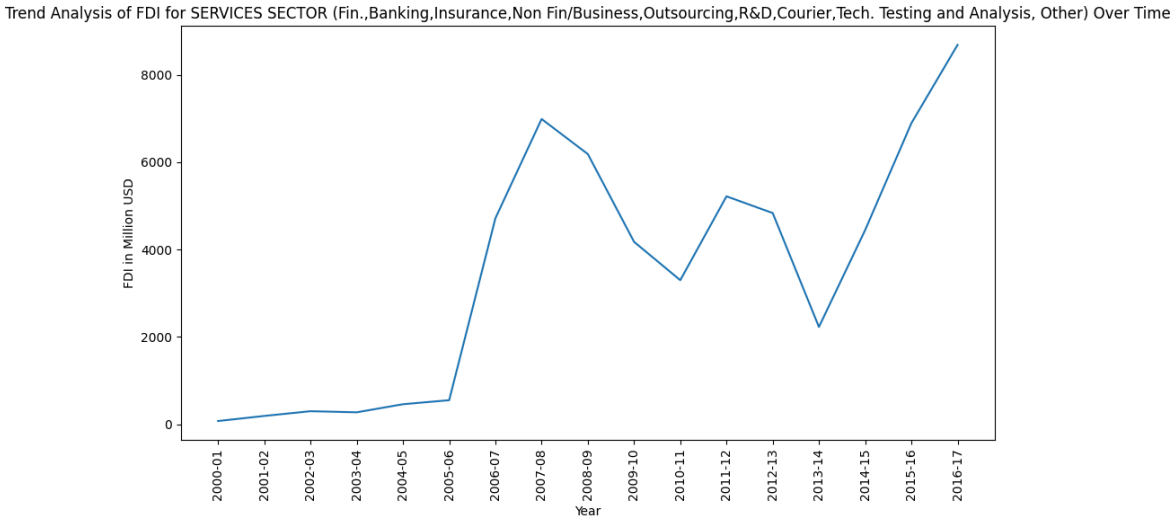

Trend Analysis of FDI for CERAMICS Over Time
FDI in Million USD
Year
0
25
50
75
100
125
150
175
200
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17

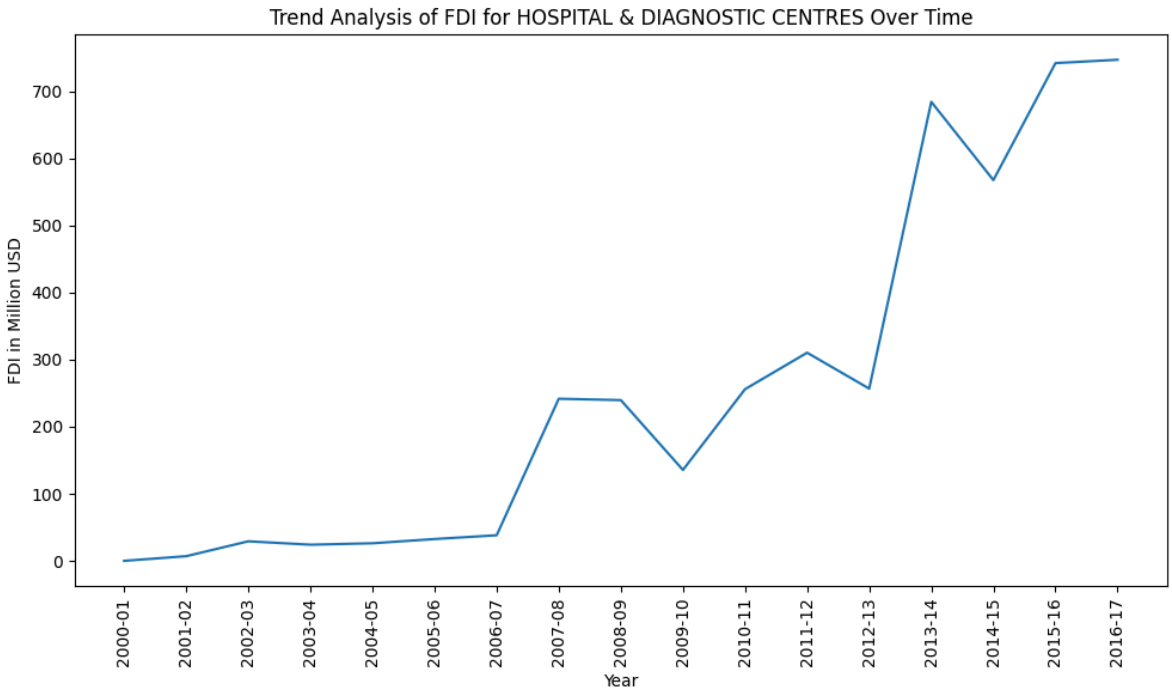

Trend Analysis of FDI for CEMENT AND GYPSUM PRODUCTS Over Time
FDI in Million USD
Year
0
500
1000
1500
2000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17

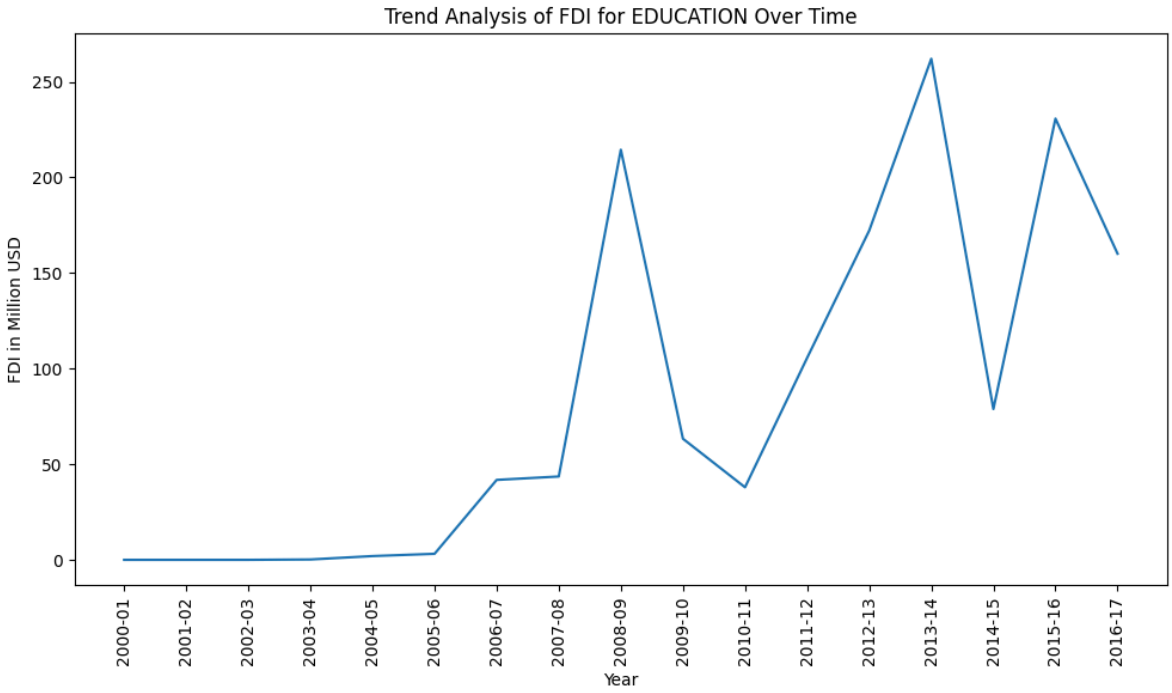

Trend Analysis of FDI for TIMBER PRODUCTS Over Time
FDI in Million USD
0
10
20
30
40
50
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

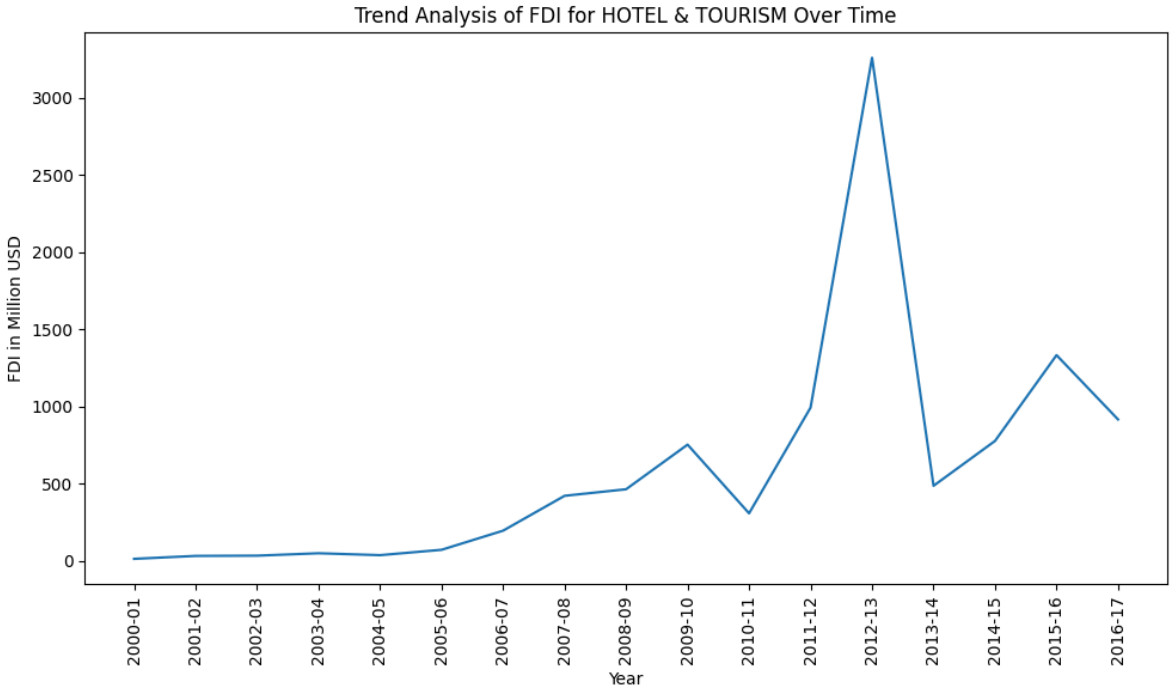

Trend Analysis of FDI for DEFENCE INDUSTRIES Over Time
FDI in Million USD
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

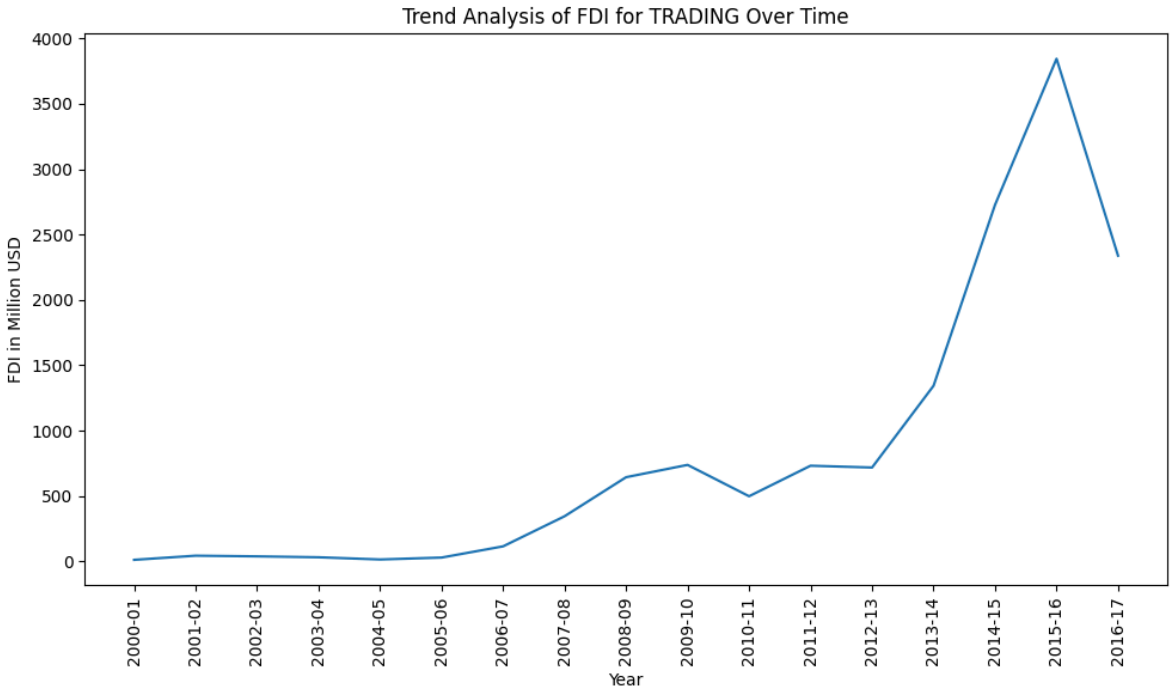

Trend Analysis of FDI for CONSULTANCY SERVICES Over Time
FDI in Million USD
0
100
200
300
400
500
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

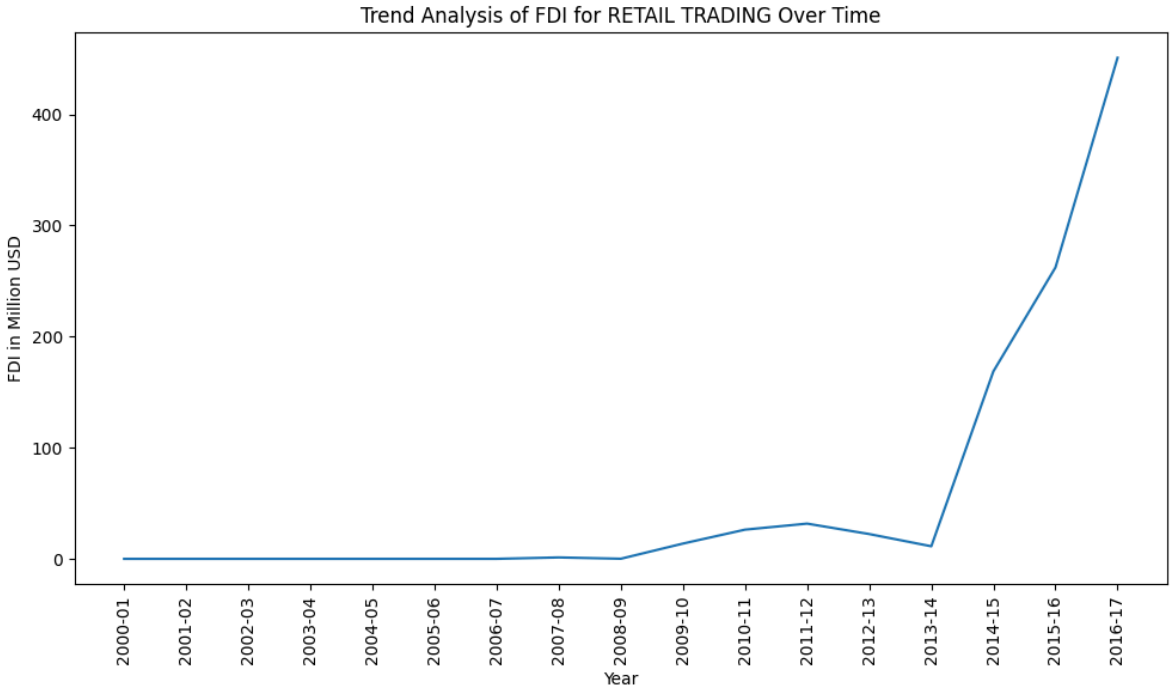

Trend Analysis of FDI for SERVICES SECTOR (Fin.,Banking,Insurance,Non Fin/Business,Outsourcing,R&D,Courier,Tech. Testing and Analysis, Other) Over Time
FDI in Million USD
0
2000
4000
6000
8000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

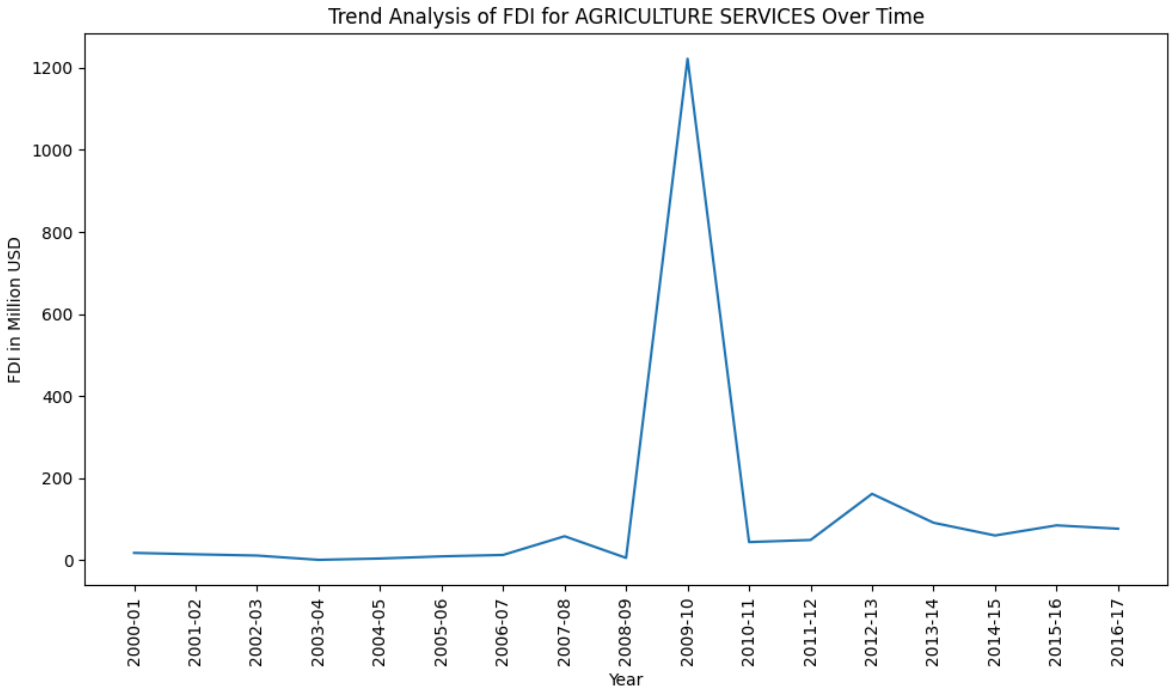

Trend Analysis of FDI for HOSPITAL & DIAGNOSTIC CENTRES Over Time
FDI in Million USD
0
100
200
300
400
500
600
700
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

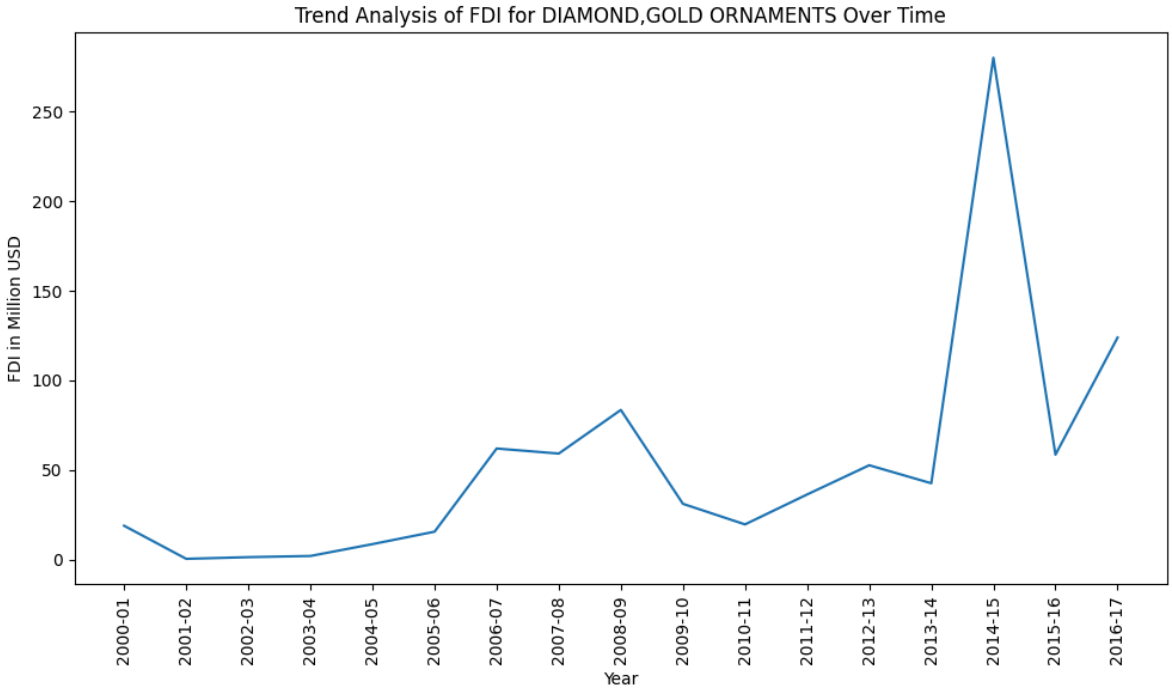

Trend Analysis of FDI for EDUCATION Over Time
FDI in Million USD
0
50
100
150
200
250
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

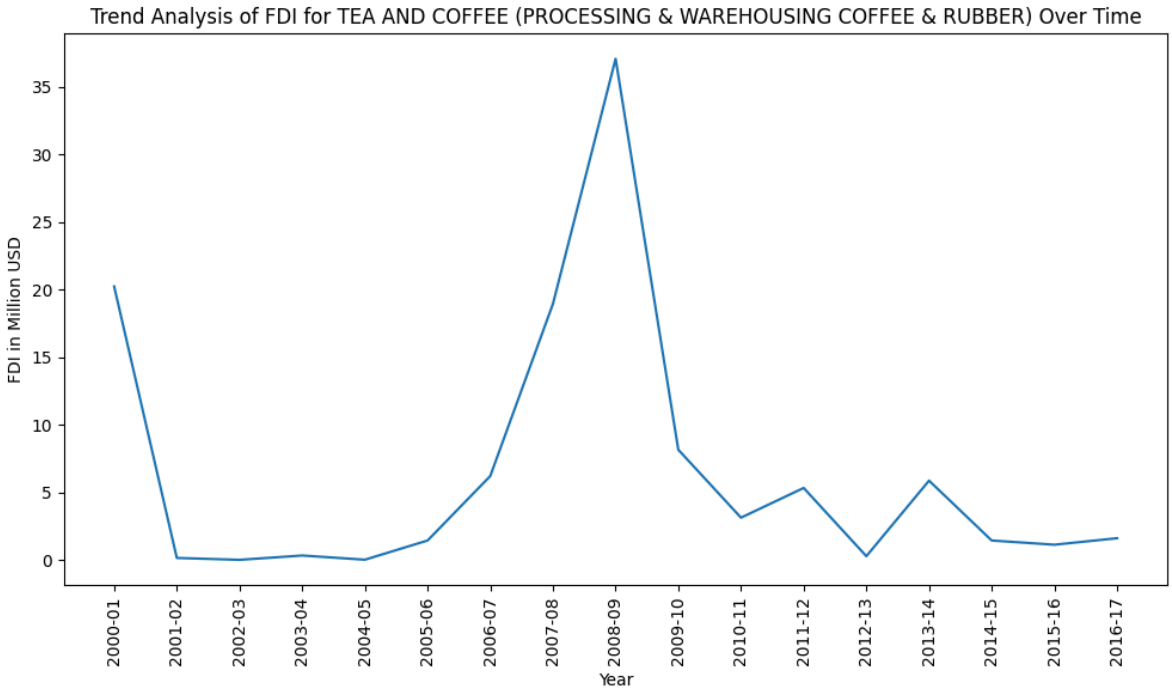

Trend Analysis of FDI for HOTEL & TOURISM Over Time
FDI in Million USD
0
500
1000
1500
2000
2500
3000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

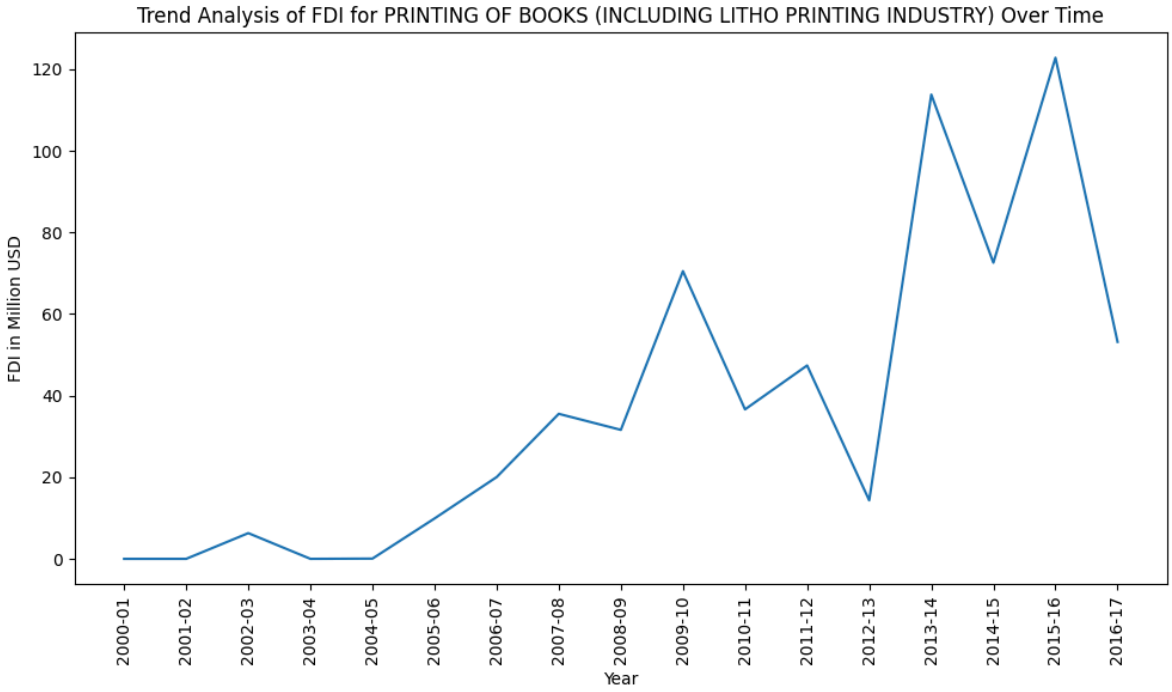

Trend Analysis of FDI for TRADING Over Time
FDI in Million USD
0
500
1000
1500
2000
2500
3000
3500
4000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

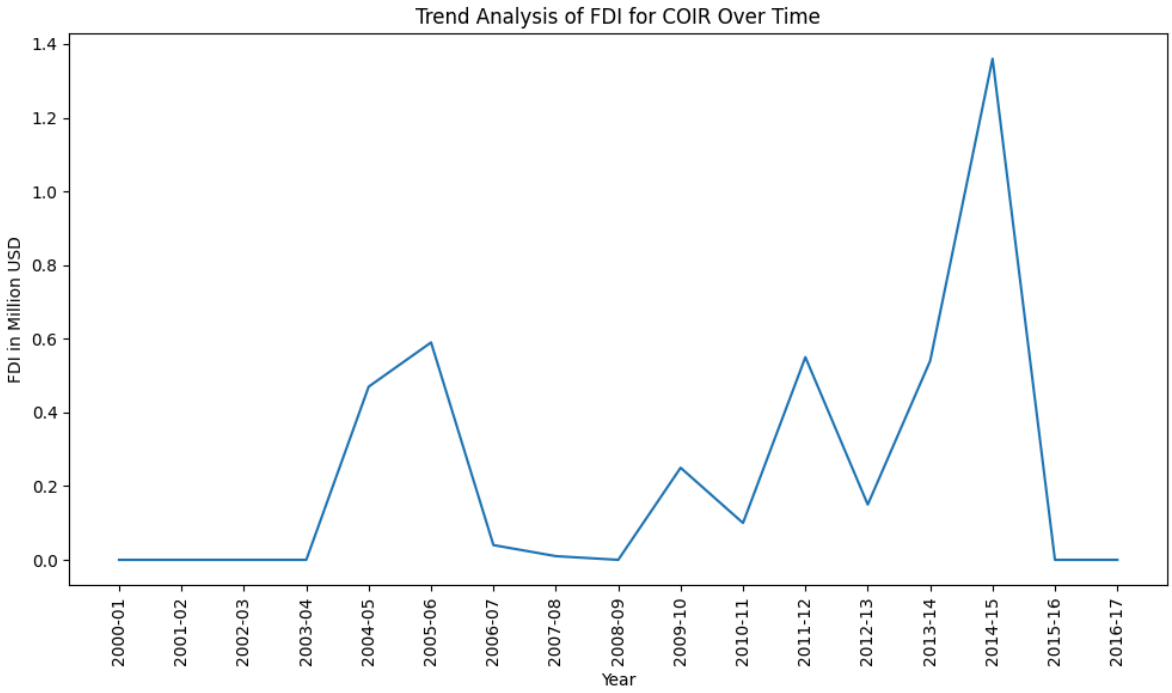

Trend Analysis of FDI for RETAIL TRADING Over Time
FDI in Million USD
0
100
200
300
400
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

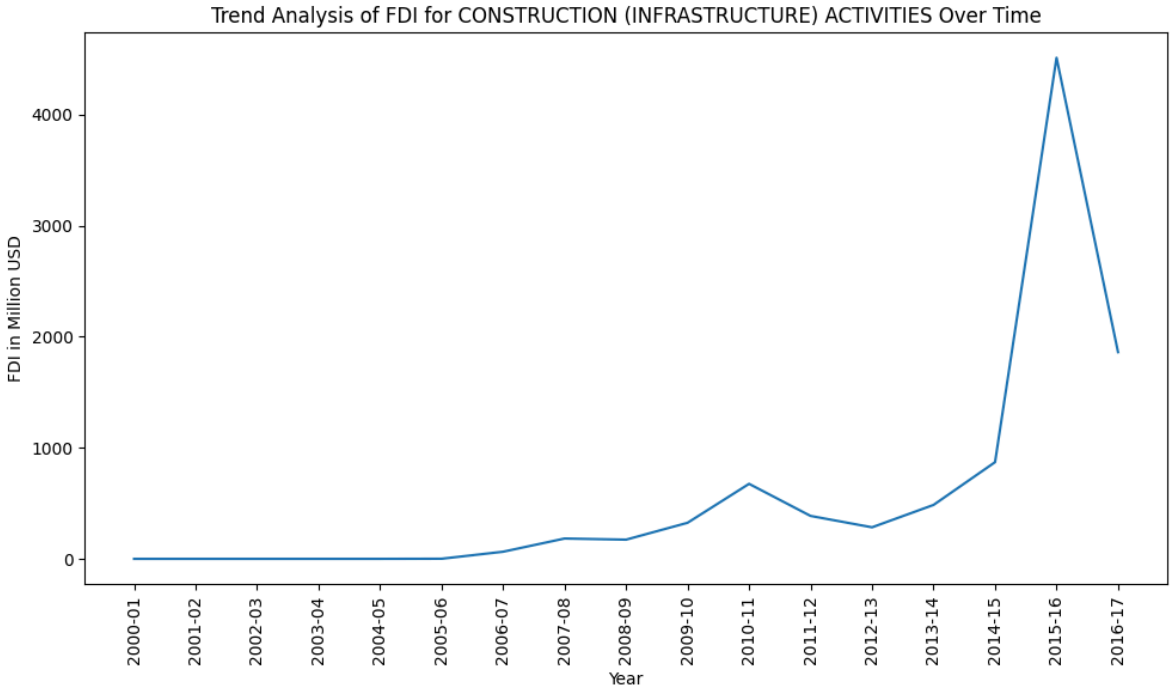

Trend Analysis of FDI for AGRICULTURE SERVICES Over Time
FDI in Million USD
0
200
400
600
800
1000
1200
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

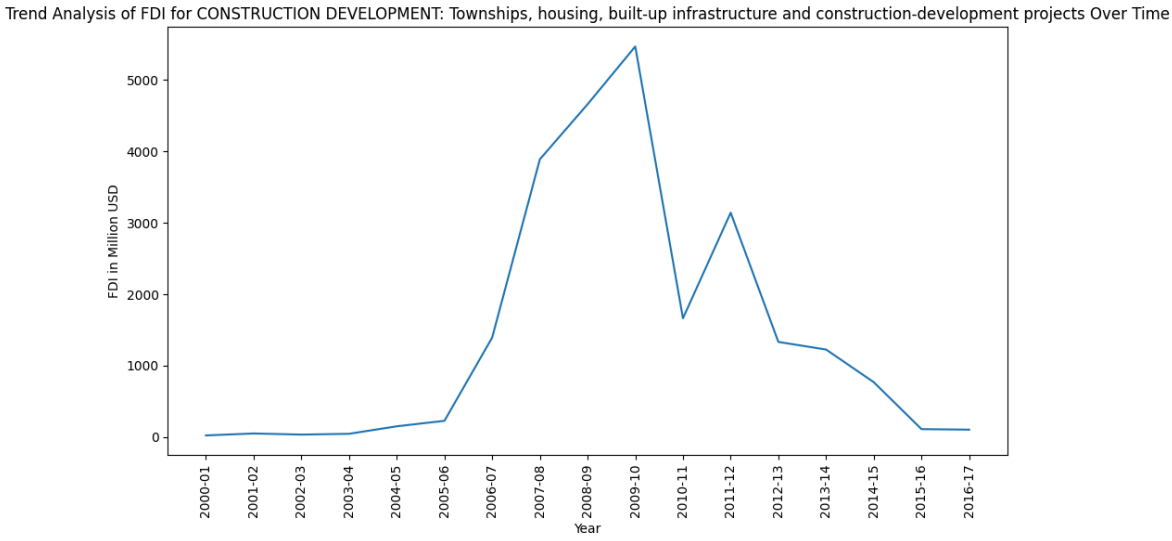

Trend Analysis of FDI for DIAMOND,GOLD ORNAMENTS Over Time
FDI in Million USD
0
50
100
150
200
250
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

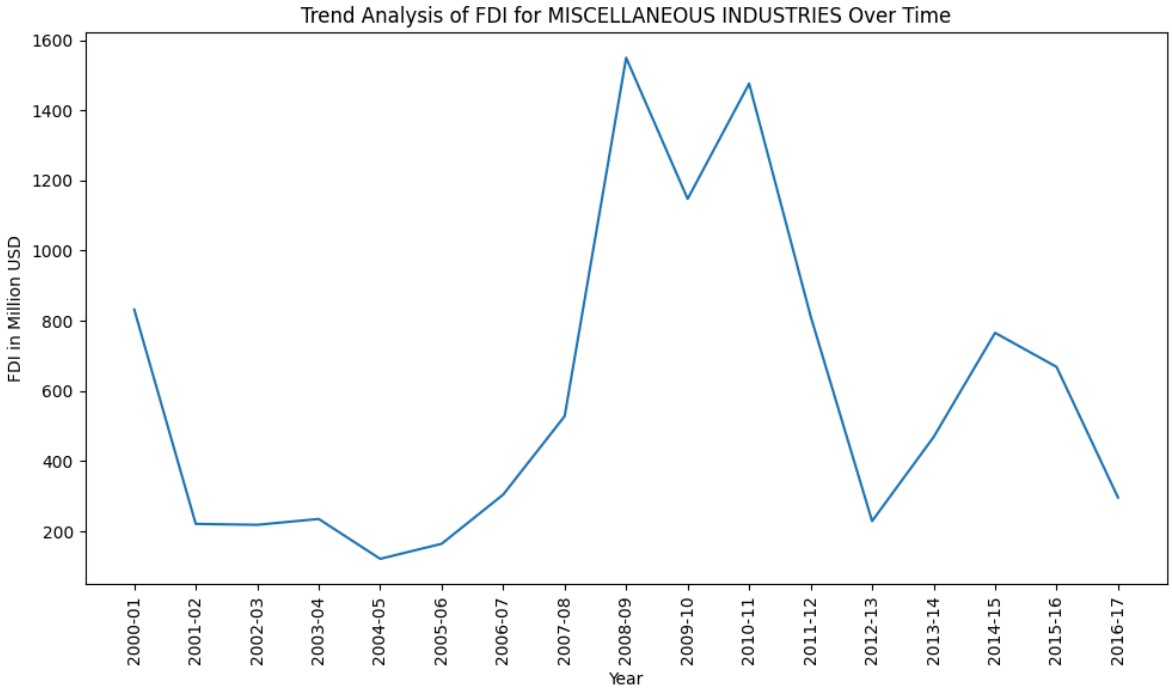

Trend Analysis of FDI for TEA AND COFFEE (PROCESSING & WAREHOUSING COFFEE & RUBBER) Over Time
FDI in Million USD
0
5
10
15
20
25
30
35
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

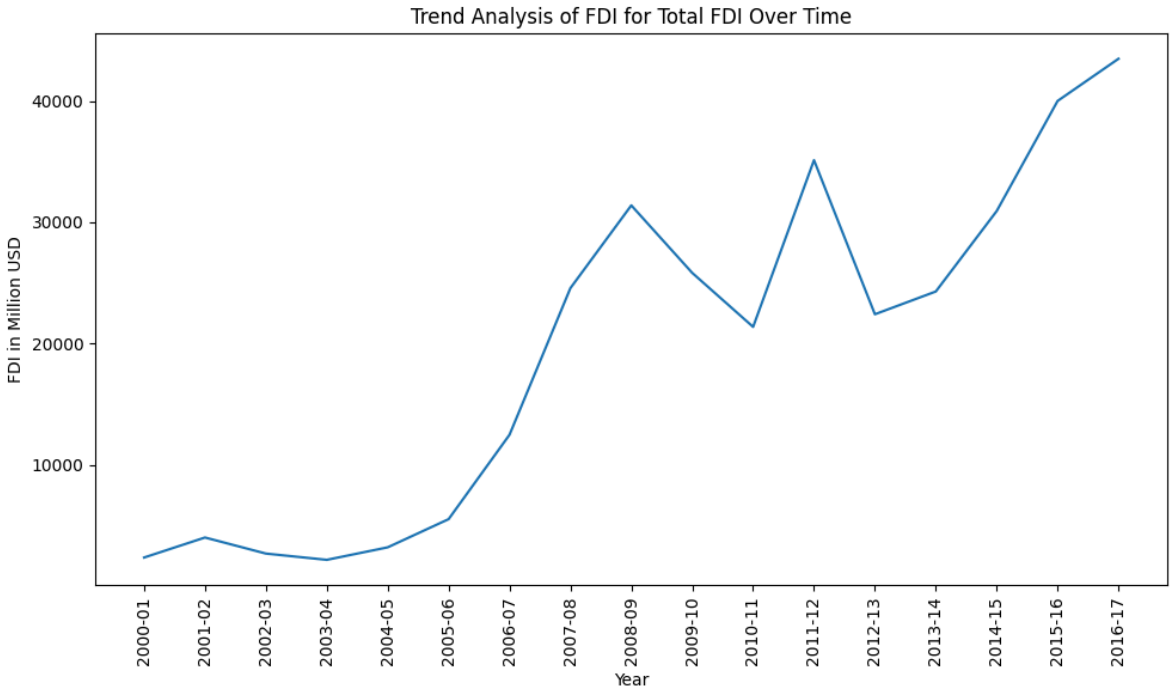

Trend Analysis of FDI for PRINTING OF BOOKS (INCLUDING LITHO PRINTING INDUSTRY) Over Time
FDI in Million USD
0
20
40
60
80
100
120
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year


Trend Analysis of FDI for COIR Over Time
FDI in Million USD
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year


Trend Analysis of FDI for CONSTRUCTION (INFRASTRUCTURE) ACTIVITIES Over Time
FDI in Million USD
0
1000
2000
3000
4000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year


Trend Analysis of FDI for CONSTRUCTION DEVELOPMENT: Townships, housing, built-up infrastructure and construction-development projects Over Time
FDI in Million USD
0
1000
2000
3000
4000
5000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

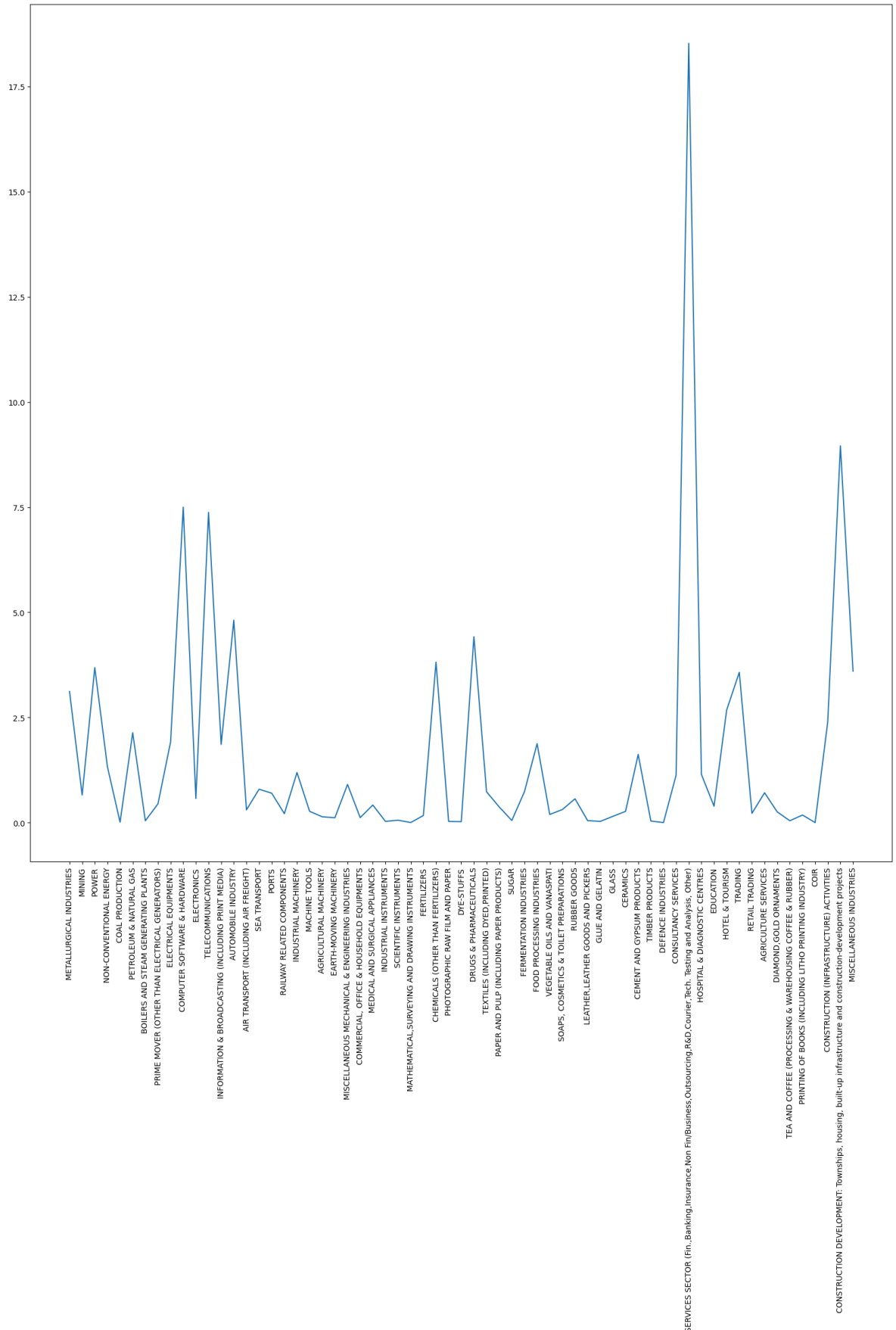

Trend Analysis of FDI for MISCELLANEOUS INDUSTRIES Over Time
FDI in Million USD
1600
1400
1200
1000
800
600
400
200
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year


Trend Analysis of FDI for Total FDI Over Time
FDI in Million USD
40000
30000
20000
10000
2000-01
2001-02
2002-03
2003-04
2004-05
2005-06
2006-07
2007-08
2008-09
2009-10
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
Year

In [132]:
```
# to calculate the percentage contribution of each sector to the total FDI amo
total_fdi = df.values.sum().sum()
print(total_fdi)
# # Calculating the percentage contribution of each sector
df['Contribution (%)'] = (df.sum(axis=1) / total_fdi) * 100

# # Displaying the resulting dataframe
print(df[['Contribution (%)']])
```

```
467728.57000000007
                                                    Contribution (%)
Sector
METALLURGICAL INDUSTRIES                                    3.118315
MINING                                                      0.656274
POWER                                                       3.684894
NON-CONVENTIONAL ENERGY                                     1.328550
COAL PRODUCTION                                             0.011229
...                                                              ...
PRINTING OF BOOKS (INCLUDING LITHO PRINTING IND...          0.180714
COIR                                                        0.001180
CONSTRUCTION (INFRASTRUCTURE) ACTIVITIES                    2.402614
CONSTRUCTION DEVELOPMENT: Townships, housing, b...          8.958193
MISCELLANEOUS INDUSTRIES                                    3.601285

[63 rows x 1 columns]
```

In [136]:
```
plt.figure(figsize=(20,20))
plt.plot(df[['Contribution (%)']])
plt.xticks(rotation=90)
plt.show()
```


17.5
15.0
12.5
10.0
7.5
5.0
2.5
0.0
METALLURGICAL INDUSTRIES
MINING
POWER
NON-CONVENTIONAL ENERGY
COAL PRODUCTION
PETROLEUM & NATURAL GAS
BOILERS AND STEAM GENERATING PLANTS
PRIME MOVER (OTHER THAN ELECTRICAL GENERATORS)
ELECTRICAL EQUIPMENTS
COMPUTER SOFTWARE & HARDWARE
ELECTRONICS
TELECOMMUNICATIONS
INFORMATION & BROADCASTING (INCLUDING PRINT MEDIA)
AUTOMOBILE INDUSTRY
AIR TRANSPORT (INCLUDING AIR FREIGHT)
SEA TRANSPORT
PORTS
RAILWAY RELATED COMPONENTS
INDUSTRIAL MACHINERY
MACHINE TOOLS
AGRICULTURAL MACHINERY
EARTH-MOVING MACHINERY
MISCELLANEOUS MECHANICAL & ENGINEERING INDUSTRIES
COMMERCIAL, OFFICE & HOUSEHOLD EQUIPMENTS
MEDICAL AND SURGICAL APPLIANCES
INDUSTRIAL INSTRUMENTS
SCIENTIFIC INSTRUMENTS
MATHEMATICAL,SURVEYING AND DRAWING INSTRUMENTS
FERTILIZERS
CHEMICALS (OTHER THAN FERTILIZERS)
PHOTOGRAPHIC RAW FILM AND PAPER
DYE-STUFFS
DRUGS & PHARMACEUTICALS
TEXTILES (INCLUDING DYED,PRINTED)
PAPER AND PULP (INCLUDING PAPER PRODUCTS)
SUGAR
FERMENTATION INDUSTRIES
FOOD PROCESSING INDUSTRIES
VEGETABLE OILS AND VANASPATI
SOAPS, COSMETICS & TOILET PREPARATIONS
RUBBER GOODS
LEATHER,LEATHER GOODS AND PICKERS
GLUE AND GELATIN
GLASS
CERAMICS
CEMENT AND GYPSUM PRODUCTS
TIMBER PRODUCTS
DEFENCE INDUSTRIES
CONSULTANCY SERVICES
SERVICES SECTOR (Fin.,Banking,insurance,Non Fin/Business,Outsourcing,R&D,Courier,Tech. Testing and Analysis, Other)
HOSPITAL & DIAGNOSTIC CENTRES
EDUCATION
HOTEL & TOURISM
TRADING
RETAIL TRADING
AGRICULTURE SERVICES
DIAMOND,GOLD ORNAMENTS
TEA AND COFFEE (PROCESSING & WAREHOUSING COFFEE & RUBBER)
PRINTING OF BOOKS (INCLUDING LITHO PRINTING INDUSTRY)
COIR
CONSTRUCTION (INFRASTRUCTURE) ACTIVITIES
CONSTRUCTION DEVELOPMENT: Townships, housing, built-up infrastructure and construction-development projects
MISCELLANEOUS INDUSTRIES

In [137]:
```
# Service sector is the highest FDI Reciever
#  Service sector is the highest FDI reciever too
# FY 2016-17  recieved highest FDI of 43478.26M dollars
```

In [ ]:

In [ ]: