```
In [9]:  import warnings
         warnings.filterwarnings('ignore')
         %run manufacturing.py
         #may
```

What do you want to name your graph?
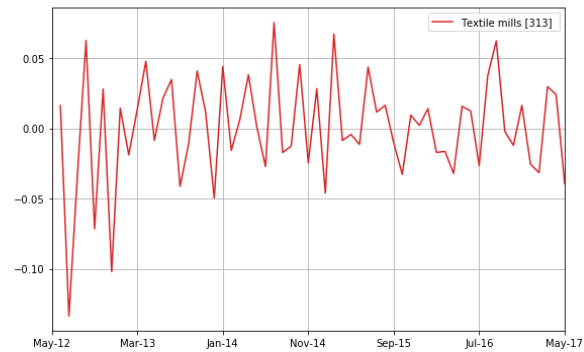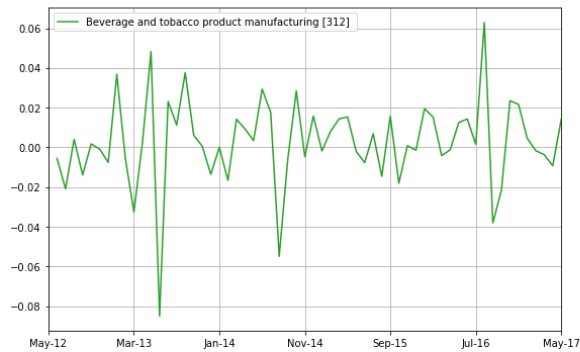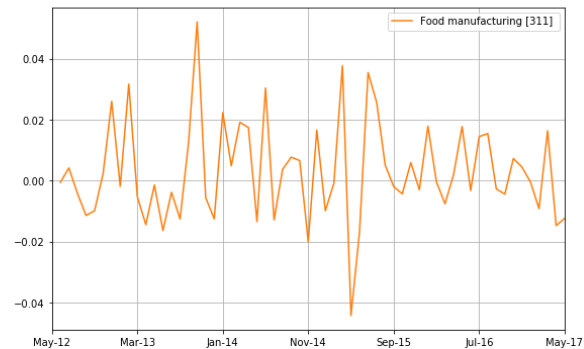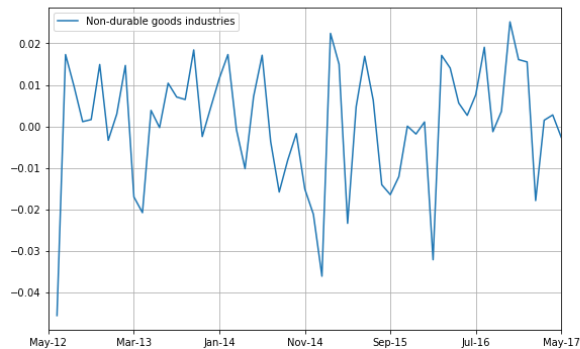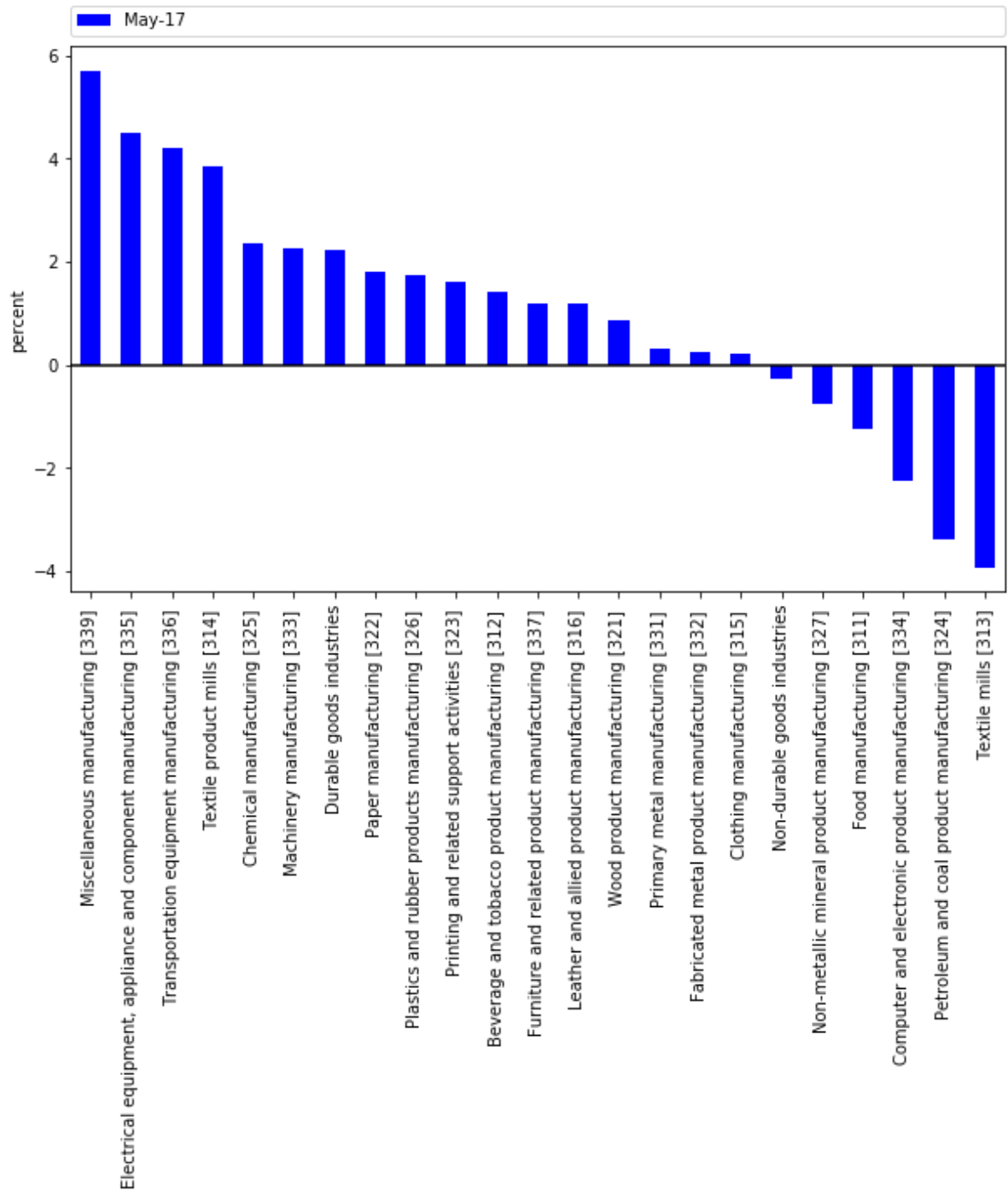May Manufacturing

Mean growth rates (monthly):
 North American Industry Classification System (NAICS)

Non-durable goods industries	6.44763 2e-04
Food manufacturing [311]	3.04821 6e-03
Beverage and tobacco product manufacturing [312]	2.47011 6e-03
Textile mills [313]	1.81590 8e-04
Textile product mills [314]	3.65318 6e-04
Clothing manufacturing [315]	-1.76425 9e-03
Leather and allied product manufacturing [316]	7.96683 3e-03
Paper manufacturing [322]	2.32335 4e-03
Printing and related support activities [323]	7.21844 2e-05
Petroleum and coal product manufacturing [324]	-4.17529 9e-03
Chemical manufacturing [325]	2.98513 4e-03
Plastics and rubber products manufacturing [326]	4.04494 1e-03
Durable goods industries	2.88174 9e-03
Wood product manufacturing [321]	8.23511 6e-03
Non-metallic mineral product manufacturing [327]	6.49716 3e-04
Primary metal manufacturing [331]	2.10989 2e-03
Fabricated metal product manufacturing [332]	1.83288 6e-07
Machinery manufacturing [333]	1.77904 5e-03
Computer and electronic product manufacturing [334]	-1.06491 3e-04
Electrical equipment, appliance and component manufacturing [335]	1.80889 7e-03
Transportation equipment manufacturing [336]	5.40830 4e-03
Furniture and related product manufacturing [337]	3.08790 9e-03
Miscellaneous manufacturing [339]	3.23358 0e-03

dtype: float64
 Standard deviation (monthly):
 North American Industry Classification System (NAICS)

Non-durable goods industries	0.01491 9
Food manufacturing [311]	0.01654 1
Beverage and tobacco product manufacturing [312]	0.02261 2

Textile mills [313]	0.038644
Textile product mills [314]	0.057086
Clothing manufacturing [315]	0.054187
Leather and allied product manufacturing [316]	0.091069
Paper manufacturing [322]	0.025879
Printing and related support activities [323]	0.019744
Petroleum and coal product manufacturing [324]	0.058099
Chemical manufacturing [325]	0.022574
Plastics and rubber products manufacturing [326]	0.016305
Durable goods industries	0.024576
Wood product manufacturing [321]	0.027669
Non-metallic mineral product manufacturing [327]	0.027394
Primary metal manufacturing [331]	0.037011
Fabricated metal product manufacturing [332]	0.019697
Machinery manufacturing [333]	0.035155
Computer and electronic product manufacturing [334]	0.024419
Electrical equipment, appliance and component manufacturing [335]	0.033127
Transportation equipment manufacturing [336]	0.054082
Furniture and related product manufacturing [337]	0.022627
Miscellaneous manufacturing [339]	0.066453

dtype: float64
Monthly Change

North American Industry Classification System (NAICS)

	May-17
North American Industry Classification System (...	
Miscellaneous manufacturing [339]	5.698428
Electrical equipment, appliance and component m...	4.515902
Transportation equipment manufacturing [336]	4.223237
Textile product mills [314]	3.854038
Chemical manufacturing [325]	2.354811
Machinery manufacturing [333]	2.247671
Durable goods industries	2.235990
Paper manufacturing [322]	1.794204
Plastics and rubber products manufacturing [326]	1.746547
Printing and related support activities [323]	1.606292
Beverage and tobacco product manufacturing [312]	1.413461
Furniture and related product manufacturing [337]	1.196662
Leather and allied product manufacturing [316]	1.177988
Wood product manufacturing [321]	0.871139
Primary metal manufacturing [331]	0.323041
Fabricated metal product manufacturing [332]	0.260342
Clothing manufacturing [315]	0.201020
Non-durable goods industries	-0.265083
Non-metallic mineral product manufacturing [327]	-0.772673
Food manufacturing [311]	-1.233764
Computer and electronic product manufacturing [...	-2.259957
Petroleum and coal product manufacturing [324]	-3.405855
Textile mills [313]	-3.931558

```
In [10]:  #June

          %run manufacturing.py
```

What do you want to name your graph?
June Manufacturing

June Manufacturing

```
Mean growth rates (monthly):
 North American Industry Classification System (NAICS)
Non-durable goods industries                                              6.44763
2e-04
Food manufacturing [311]                                                 3.04821
6e-03
Beverage and tobacco product manufacturing [312]                         2.47011
6e-03
Textile mills [313]                                                      1.81590
8e-04
Textile product mills [314]                                             3.65318
6e-04
Clothing manufacturing [315]                                            -1.76425
9e-03
Leather and allied product manufacturing [316]                           7.96683
3e-03
Paper manufacturing [322]                                                2.32335
4e-03
Printing and related support activities [323]                            7.21844
2e-05
Petroleum and coal product manufacturing [324]                          -4.17529
9e-03
Chemical manufacturing [325]                                             2.98513
4e-03
Plastics and rubber products manufacturing [326]                         4.04494
1e-03
Durable goods industries                                                 2.88174
9e-03
Wood product manufacturing [321]                                         8.23511
6e-03
Non-metallic mineral product manufacturing [327]                         6.49716
3e-04
Primary metal manufacturing [331]                                        2.10989
2e-03
Fabricated metal product manufacturing [332]                             1.83288
6e-07
Machinery manufacturing [333]                                            1.77904
5e-03
Computer and electronic product manufacturing [334]                     -1.06491
3e-04
Electrical equipment, appliance and component manufacturing [335]        1.80889
7e-03
Transportation equipment manufacturing [336]                             5.40830
4e-03
Furniture and related product manufacturing [337]                        3.08790
9e-03
Miscellaneous manufacturing [339]                                        3.23358
0e-03
dtype: float64
 Standard deviation (monthly):
 North American Industry Classification System (NAICS)
Non-durable goods industries                                             0.01491
9
Food manufacturing [311]                                                 0.01654
1
Beverage and tobacco product manufacturing [312]                         0.02261
2
```
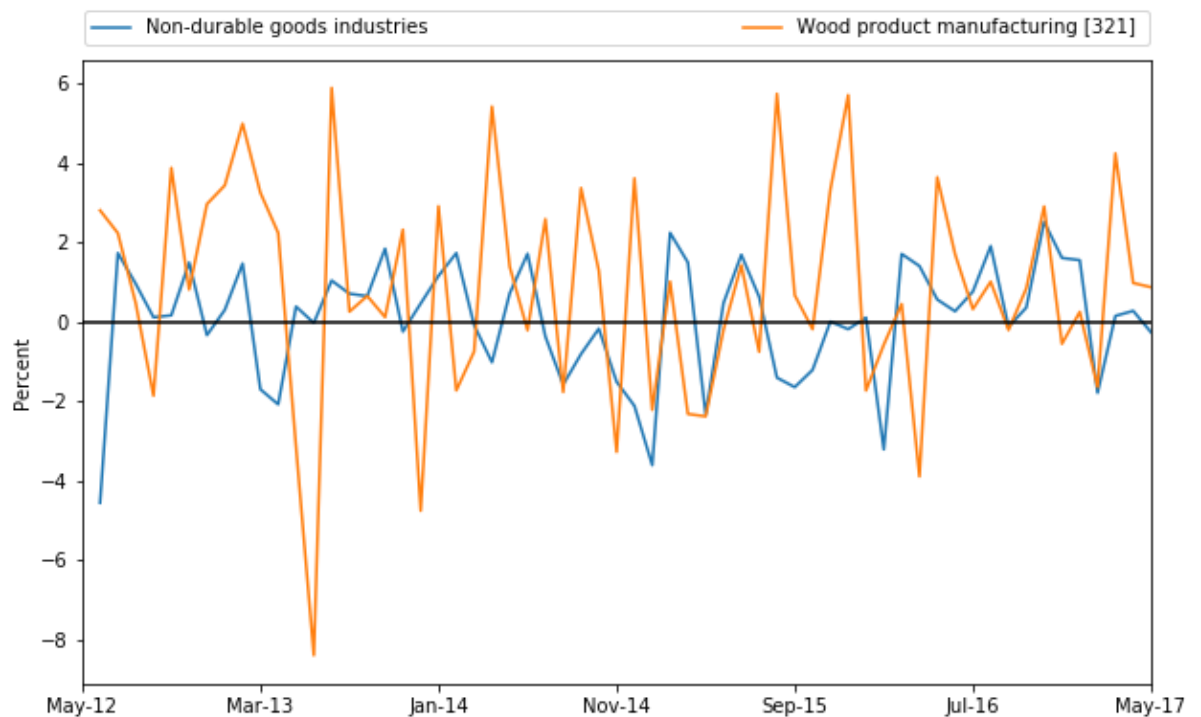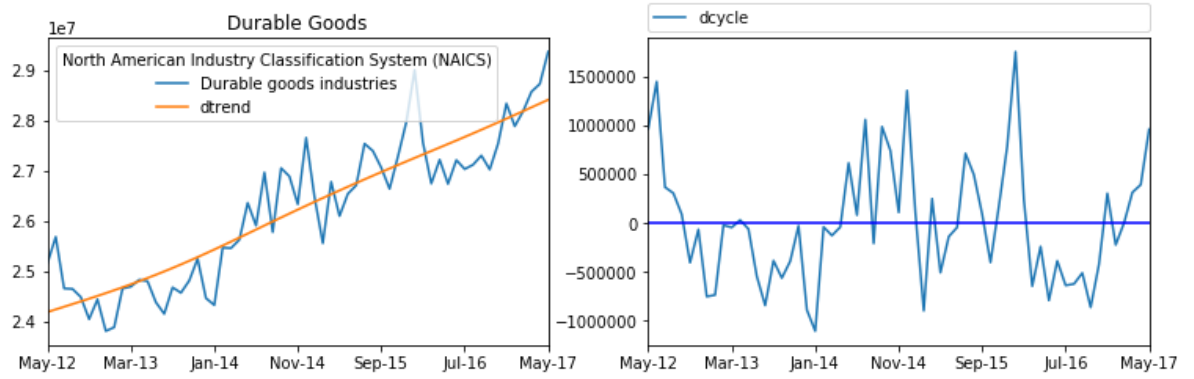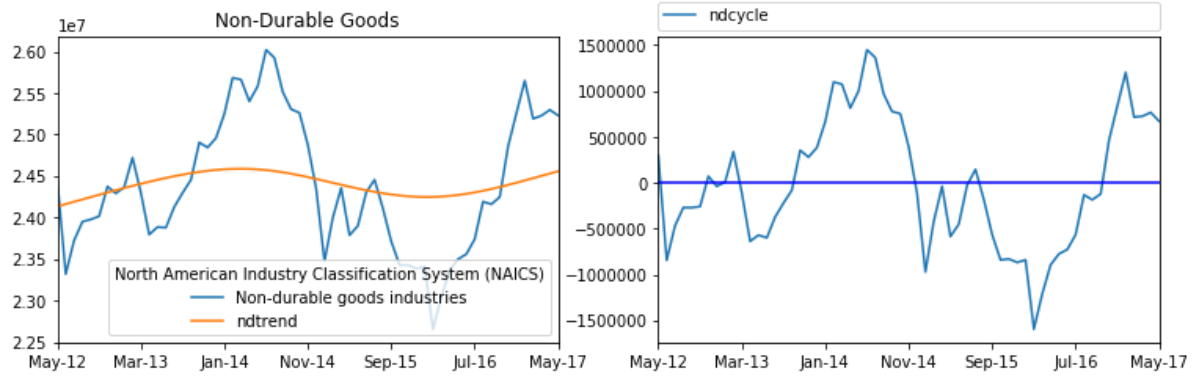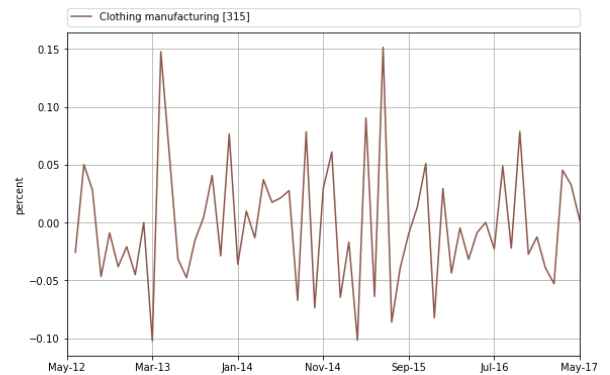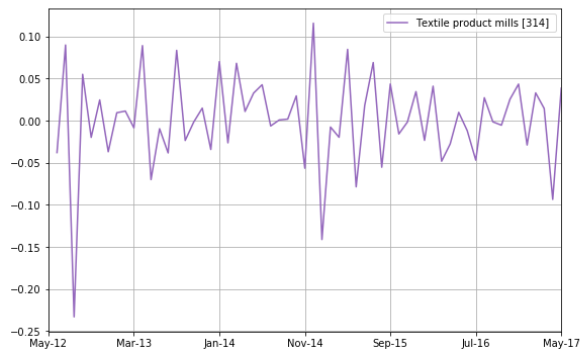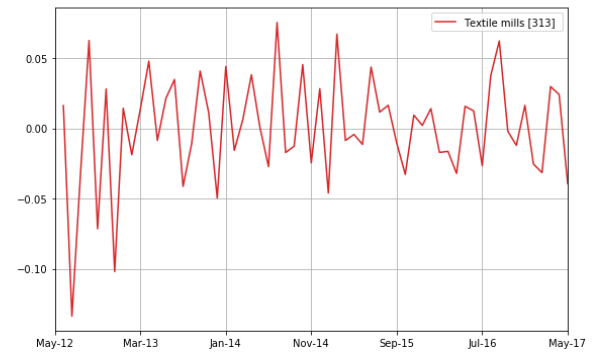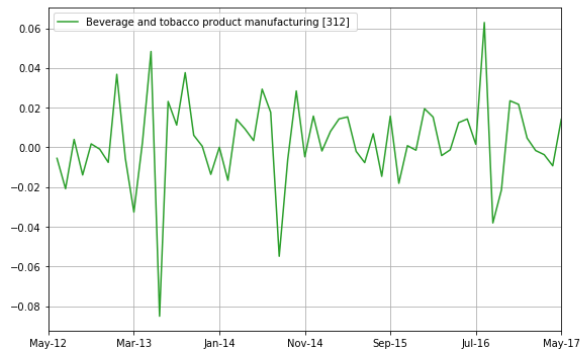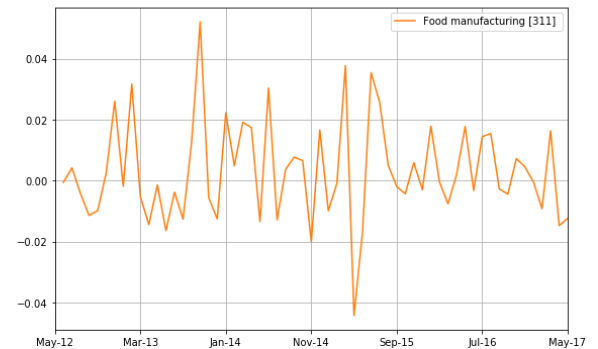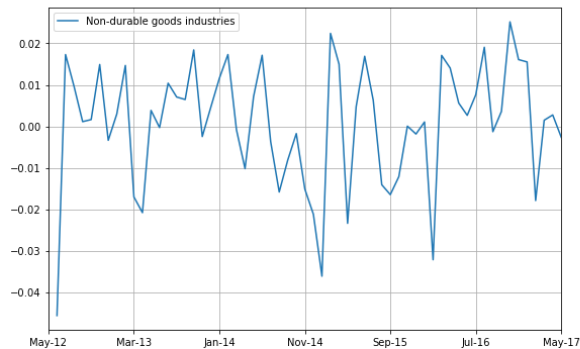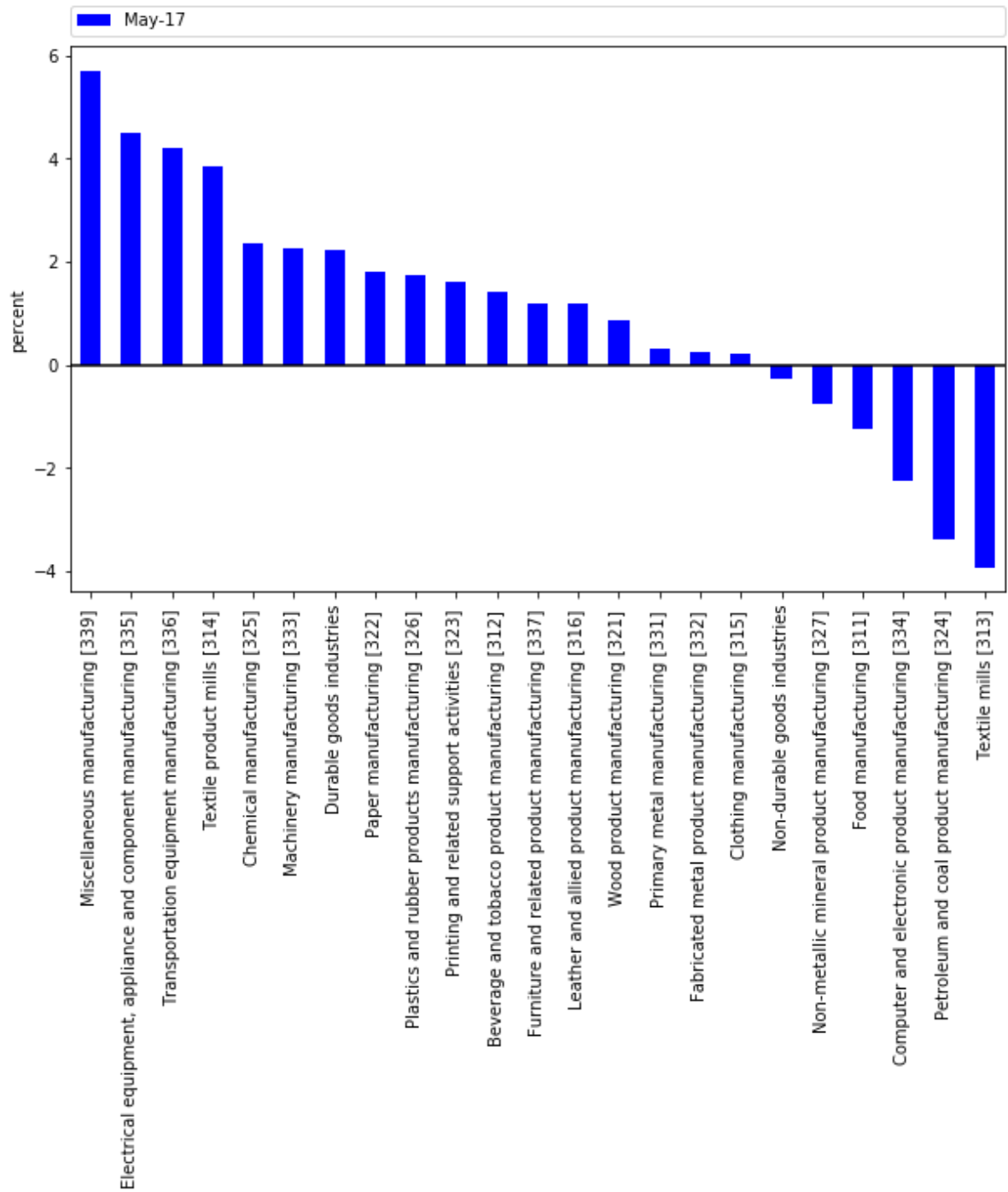
```
Textile mills [313]                                                          0.03864
4
Textile product mills [314]                                                  0.05708
6
Clothing manufacturing [315]                                                 0.05418
7
Leather and allied product manufacturing [316]                              0.09106
9
Paper manufacturing [322]                                                    0.02587
9
Printing and related support activities [323]                               0.01974
4
Petroleum and coal product manufacturing [324]                              0.05809
9
Chemical manufacturing [325]                                                 0.02257
4
Plastics and rubber products manufacturing [326]                            0.01630
5
Durable goods industries                                                     0.02457
6
Wood product manufacturing [321]                                             0.02766
9
Non-metallic mineral product manufacturing [327]                            0.02739
4
Primary metal manufacturing [331]                                            0.03701
1
Fabricated metal product manufacturing [332]                                0.01969
7
Machinery manufacturing [333]                                                0.03515
5
Computer and electronic product manufacturing [334]                         0.02441
9
Electrical equipment, appliance and component manufacturing [335]           0.03312
7
Transportation equipment manufacturing [336]                                0.05408
2
Furniture and related product manufacturing [337]                           0.02262
7
Miscellaneous manufacturing [339]                                            0.06645
3
dtype: float64
Monthly Change
```
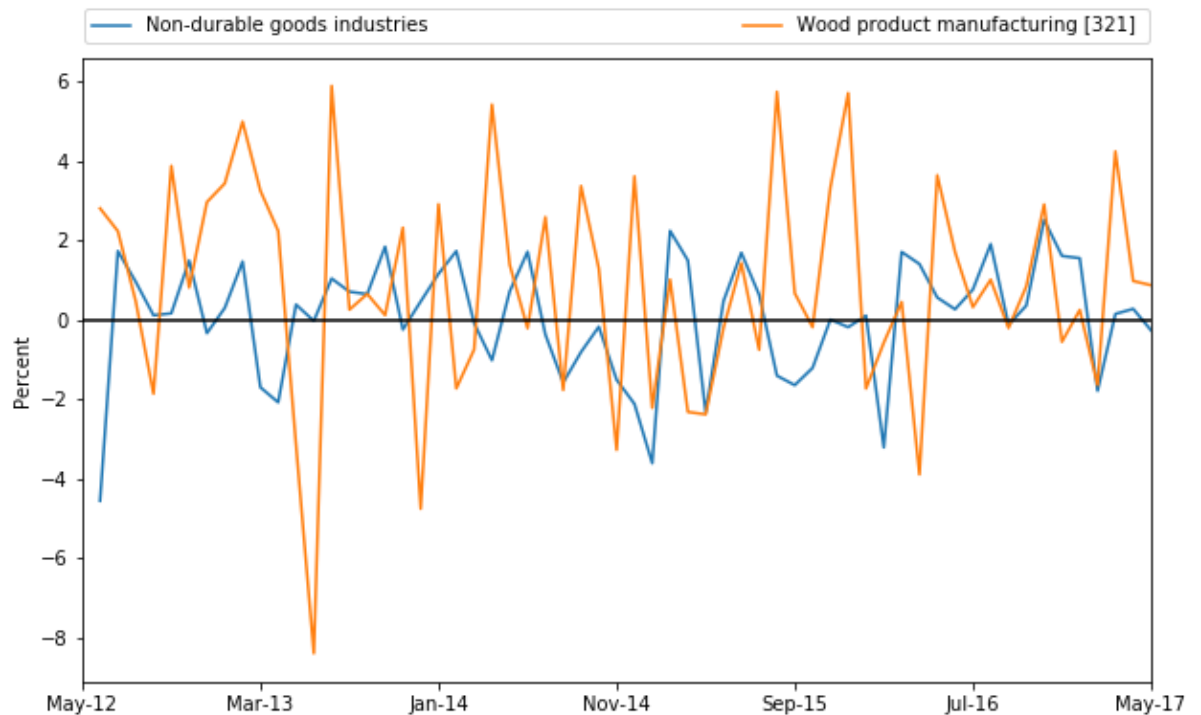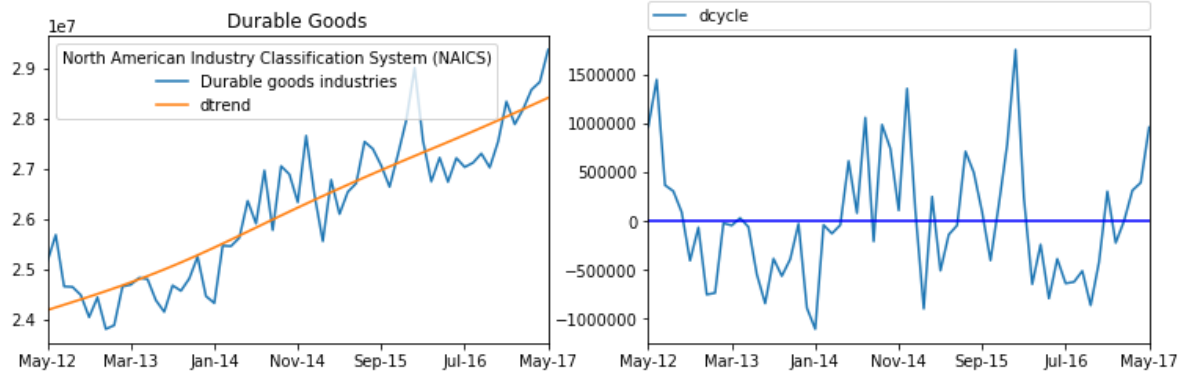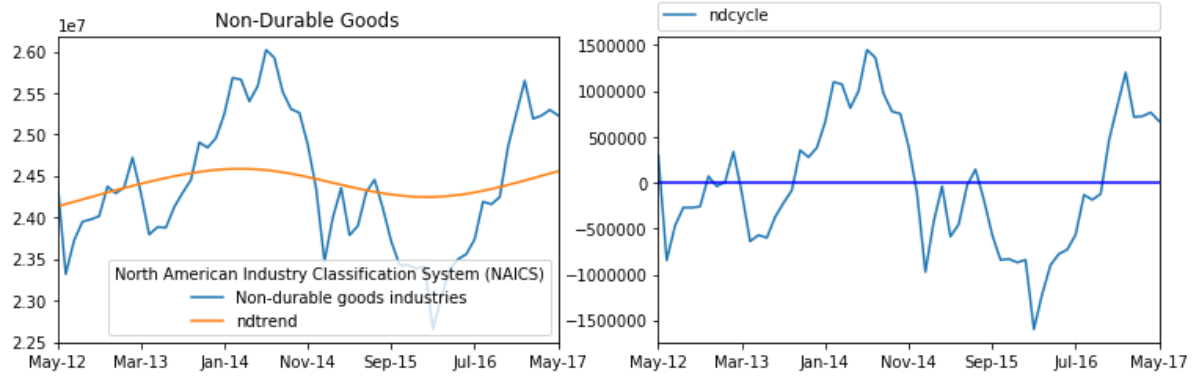
North American Industry Classification System (NAICS)

	May-17
North American Industry Classification System (...	
Miscellaneous manufacturing [339]	5.698428
Electrical equipment, appliance and component m...	4.515902
Transportation equipment manufacturing [336]	4.223237
Textile product mills [314]	3.854038
Chemical manufacturing [325]	2.354811
Machinery manufacturing [333]	2.247671
Durable goods industries	2.235990
Paper manufacturing [322]	1.794204
Plastics and rubber products manufacturing [326]	1.746547
Printing and related support activities [323]	1.606292
Beverage and tobacco product manufacturing [312]	1.413461
Furniture and related product manufacturing [337]	1.196662
Leather and allied product manufacturing [316]	1.177988
Wood product manufacturing [321]	0.871139
Primary metal manufacturing [331]	0.323041
Fabricated metal product manufacturing [332]	0.260342
Clothing manufacturing [315]	0.201020
Non-durable goods industries	-0.265083
Non-metallic mineral product manufacturing [327]	-0.772673
Food manufacturing [311]	-1.233764
Computer and electronic product manufacturing [...	-2.259957
Petroleum and coal product manufacturing [324]	-3.405855
Textile mills [313]	-3.931558

```
In [7]: dfframes=[dfgrowth.iloc[-13,:],dfgrowth.iloc[-2,:],dfgrowth.iloc[-1,:],dfgrowt
h.mean()]
#dftable.columns=["June 2016 Growth Rate","May 2017 Growth Rate","June 2017 Gr
owth Rate","Mean Growth Rates"]
dftable=pd.concat(dfframes,axis=1)
dftable.rename(columns={0:"Mean Growth Rates"},inplace=True)


def color_negative_red(val):
    """
    Takes a scalar and returns a string with
    the css property `'color: red'` for negative
    strings, black otherwise.
    """
    color = 'red' if val < 0 else 'black'
    return 'color: %s' % color

dftable.style.applymap(color_negative_red)
```

Out[7]:

	16-Jun	17-May	17-Jun	Mean Growth Rates
North American Industry Classification System (NAICS)				
Manufacturing [31-33]	1.0665	1.28113	-1.82809	0.172466
Non-durable goods industries	0.264378	0.380808	-2.21878	0.117301
Food manufacturing [311]	-0.32153	0.00179244	0.74667	0.353613
Beverage and tobacco product manufacturing [312]	1.42909	0.145493	-1.96958	0.171525
Textile mills [313]	1.24882	-3.65224	0.314888	0.00244552
Textile product mills [314]	-1.19393	-0.113692	-2.62005	0.070899
Clothing manufacturing [315]	-0.00451322	-0.416599	-4.21951	-0.18507
Leather and allied product manufacturing [316]	12.4317	-2.66264	-7.6397	0.440298
Paper manufacturing [322]	-1.57147	2.82868	-1.06651	0.239478
Printing and related support activities [323]	-0.801368	1.564	0.14825	-0.000642726
Petroleum and coal product manufacturing [324]	-0.125627	-3.00291	-7.11847	-0.334444
Chemical manufacturing [325]	0.738332	2.62955	-4.47253	0.323274
Plastics and rubber products manufacturing [326]	3.57403	2.55876	-0.524257	0.406615
Durable goods industries	1.7715	2.07047	-1.49123	0.23614
Wood product manufacturing [321]	1.70544	1.31134	-2.93017	0.737364
Non-metallic mineral product manufacturing [327]	2.42531	-0.622978	-0.655789	0.114237
Primary metal manufacturing [331]	-0.585072	-0.151688	-2.26847	0.184138
Fabricated metal product manufacturing [332]	1.62956	-0.956344	-0.719346	-0.0737893
Machinery manufacturing [333]	6.0894	2.98814	1.80308	0.0876371
Computer and electronic product manufacturing [334]	2.30369	-2.18152	2.25925	0.13423
Electrical equipment, appliance and component manufacturing [335]	2.11973	3.5178	-4.70485	0.0147411
Transportation equipment manufacturing [336]	1.07528	4.00623	-2.25035	0.481702

	16-Jun	17-May	17-Jun	Mean Growth Rates
North American Industry Classification System (NAICS)				
Furniture and related product manufacturing [337]	0.244835	1.49472	0.484546	0.268226
Miscellaneous manufacturing [339]	7.33483	5.74899	-3.14183	0.26397

In [ ]: