birth

July 4, 2023

[1]:
```
import ssl

import matplotlib.patches as mpatches
import matplotlib.pyplot as plt
import pandas as pd
from matplotlib.ticker import FuncFormatter
```

[2]:
```
ssl._create_default_https_context = ssl._create_unverified_context
```

[3]:
```
url = 'https://worldtable.info/gosudarstvo/
 ↪tablica-rozhdaemosti-po-godam-rossija.html'
```

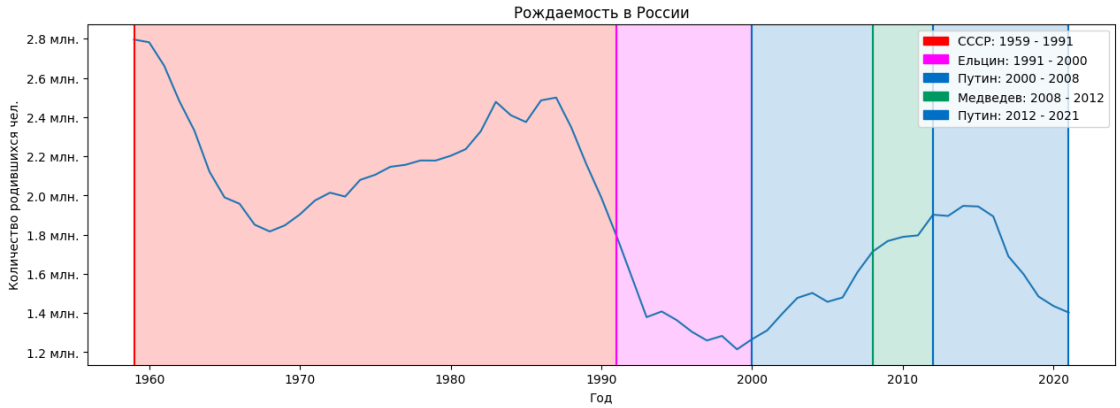
[4]:
```
new_columns = {
    '               .': 'birth_count',
    '  ': 'year'
}
```

[5]:
```
df_birth = pd \
            .read_html(url, header=0)[0] \
            .rename(columns=new_columns) \
            .replace({'birth_count': {' ': ''}}, regex=True) \
            .astype({'birth_count': int})
```

[6]:
```
presidents = [(1959, 1991, '#FF0000', '   '),
              (1991, 2000, '#FF00FF', '    '),
              (2000, 2008, '#006FC4', '   '),
              (2008, 2012, '#009861', '     '),
              (2012, 2021, '#006FC4', '   ')
              ]
```

[7]:
```
plt.subplots(figsize=(15, 5))

plt.plot(df_birth.year, df_birth.birth_count)
plt.ticklabel_format(style='plain')
plt.title('            ')
plt.xlabel('  ')
plt.ylabel('               .')
```

```
#                          y
def millions_formatter(x, pos):
    return '{:.1f}   .'.format(x/1000000)

#              y
formatter = FuncFormatter(millions_formatter)
plt.gca().yaxis.set_major_formatter(formatter)

#
patches = []
for president in presidents:
    plt.axvline(x=president[0], color=president[2])
    plt.axvline(x=president[1], color=president[2])
    plt.axvspan(president[0], president[1], facecolor=president[2], alpha=0.2)

    patch = mpatches.Patch(color=president[2], label='{}: {} - {}'.
 ↪format(president[3], president[0], president[1]))
    patches.append(patch)

#
plt.legend(handles=patches, loc='upper right')

plt.show()
```



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