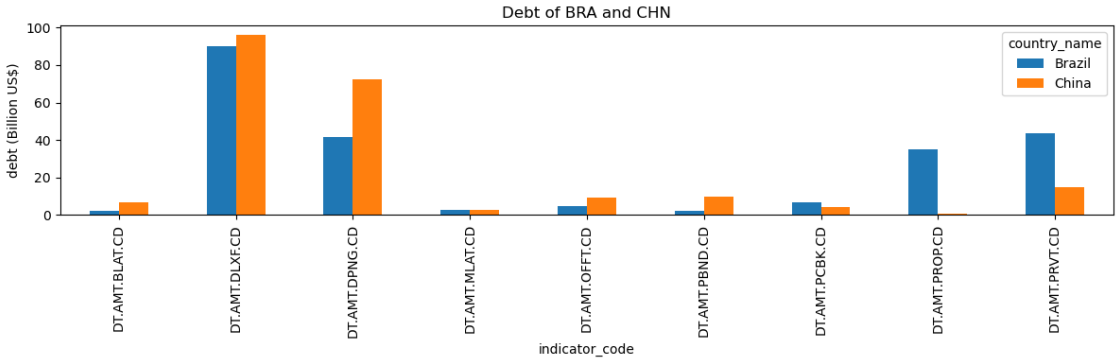
Question 1.8: Look at the result above. Do you notice any big difference in the amount of debt in some categories between Brazil and China?

To look into this I will start by plotting the amount of debt (`indicator_code` starting with `DT.AMT`) to get a view of the differences – see the full overview of the World Bank Metadata Glossary here

```
In [25]: BRA_CHN = res_q1_7.DataFrame()
         BRA_CHN = BRA_CHN[BRA_CHN['indicator_code'].str.startswith('DT.AMT')]
         BRA_CHN['debt'] = BRA_CHN['debt']/1000000000
         fig, ax = plt.subplots(figsize=(12, 4))
         BRA_CHN.pivot(columns='country_name', index='indicator_code', values='debt').plot(kind='bar', a
         ax.set_ylabel('debt (Billion US$)')
         ax.set_title('Debt of BRA and CHN')
         plt.tight_layout()
         plt.show()
```



In the plot above I notice 3 categories specifically where the debt levels of the two countries differ drastically. Those are *Principal repayments on external debt, private nonguaranteed (PNG)*, *PPG, other private creditors*, and *PPG, private creditors*. For the first category, China's debt is more than US$ 30 billion greater than that of Brazil while Brazil leads in the two other. For the two latter the debt of Brazil is around US$ 30 billion greater than that of China.

```
In [26]: display(BRA_CHN[(BRA_CHN['indicator_code']=='DT.AMT.DPNG.CD')|(BRA_CHN['indicator_code']=='DT.
```

```
   country_name                                    indicator_name  \
4        Brazil  Principal repayments on external debt, private…
5         China  Principal repayments on external debt, private…
14       Brazil    PPG, other private creditors (AMT, current US$)
15        China    PPG, other private creditors (AMT, current US$)
16       Brazil          PPG, private creditors (AMT, current US$)
```

```
17        China          PPG, private creditors (AMT, current US$)

    indicator_code       debt
4   DT.AMT.DPNG.CD  41.831444
5   DT.AMT.DPNG.CD  72.392986
14  DT.AMT.PROP.CD  35.119004
15  DT.AMT.PROP.CD   0.796544
16  DT.AMT.PRVT.CD  43.598697
17  DT.AMT.PRVT.CD  14.677464
```