Overview

This folder contains the replication code for *Exorbitant Privilege Gained and Lost: Fiscal Implication*, by Zefeng Chen Zhengyang Jiang, Hanno N. Lustig, Stijn Van Nieuwerburgh, and Mindy Z. Xiaolan.

The majority of the code was written in Matlab 2022b, while some Stata and Python code was used for auxiliary purposes and generating some supplementary tables.

Instruction for Replication

Run main.m in the root folder to generate all figures and tables. This code calls Matlab execution files in the subfolders UK, US, Netherlands, and summarystats. Once the code finishes running, the figures and tables are contained in the folder "results".

Dataset list

The table below includes all the datasets used directly by the code. The main dataset list contains the key data that are used in the paper's core analysis. The supplementary data list contains data that are used as supplementary for generating statistics, tables and figures, and robustness tests and are not involved in the main analysis.

Main Dataset list

Data file	Source	Usage	Notes

data/main_VAR/UK_source_pre1946.xlsx		The main data file for pre-1946 UK sample fiscal capacity analysis	Please see Readme tab in this datafile for construction details. (also see Dataset Construction section)
data/main_VAR/UK_source_pre1946.xlsx		The main data file for post-1946 UK sample fiscal capacity analysis	Please see Readme tab in this datafile for construction details.
data/main_VAR/UK_full.xlsx	The combination of *UK_source_pre1946.xlsx* and *UK_source_pre1946.xlsx*	The UK full sample data for statistics and plots.	Constructed using *data/main_VAR/combine.ipynb* to combine the two subsample data
data/main_VAR/US_source_pre1929.xlsx		Auxiliary dataset for US fiscal capacity analysis, containing 1793-1929 data.	Please see Readme tab in this datafile for construction details.
data/main_VAR/US_source_post1929.xlsx		Auxiliary dataset for US fiscal capacity analysis, containing 1929-2020 data.	Please see Readme tab in this datafile for construction details.
data/main_VAR/US_full.xlsx	The combination of *US_source_pre1929.xlsx* and *US_source_post1929.xlsx*	The main US data for statistics and plots, and for pre1946 and post 1946 fiscal capacity analysis.	Constructed using *data/main_VAR/combine.ipynb* to combine the two subsample data

data/Netherlands/Holland_PF_v2.xlsx	The main data file for 1600-1794 Dutch fiscal capacity analysis	Please see Readme tab in this datafile for construction details.
data/Netherlands/NetherlandsPF_1815_1938.xlsx	The main data file for 1815-1914 Dutch fiscal capacity analysis	Please see Readme tab in this datafile for construction details.

Supplementary Dataset list

For sources and construction, please see the Construction section below.

Data file	Content
data/supplementary/UK_bc.xlsx	UK business cycle indicators
data/supplementary/UK_consumption.xlsx	UK consumption growth 1729-2020
data/supplementary/UK_cony.xlsx	Estimates of UK convenience yield 1729-1946
Data/supplementary/UKgiltreturn.xlsx	UK nominal bond return
Data/supplementary/US_bc_Davis2006.xlsx	US business cycle indicators
Data/supplementary/US_consumption.xlsx	US consumption post 1870
Data/supplementary/US_Treasury_Debt_1776_2018.xlsx	Market value of US government debt 1776-2018

Data/supplementary/USGDP_1790_2020.xlsx	US nominal GDP 1790-2020
Data/supplementary/govdebt.xlsx	Alternative measure for US government debt post 1942
Data/colony/colonial_debt_cleaned.xls	Debt and GDP for countries that are once UK colonies
Data/colony/colony_surplus.xlsx	UK colonial government surplus
Data/colony/colony_average_surplus.xlsx	GDP weighted average of UK colonial government surplus
Data/colony/India.xlsx	British India government surplus

Detailed Dataset Constructions

data/main_VAR/ UK_source_pre1946.xlsx

Variable Name	Description	Construction
inflation	Annual inflation	From the *Millennium* data (Thomas and Dimsdale, 2017), use nominal GDP (Sheet ' A9. Nominal GDP (A) ' Column D *Market prices*) divided by real GDP (Sheet 'A8. UK Real GDP(A)' Column D *Market prices*) to compute the GDP deflator, then take log difference to get inflation.
real gdp growth	Annual real GDP growth	From the *Millennium* data (Thomas and Dimsdale, 2017), take log difference of real GDP series (Sheet 'A8. UK Real GDP(A)' Column D).
revtogdp	Central government revenue to GDP ratio	From the Millennium data (Thomas and Dimsdale, 2017), use the government revenue series (Sheet 'A27. Central govt borrowing ' series *ANBV*) divided by nominal GDP (Sheet ' A9. Nominal GDP (A) ' Column D *Market prices*). Note that our government revenue series is adjusted for the difference between fiscal year and calendar year, assuming the annual revenue is equally distributed in each quarter of a fiscal year, and calculating calendar year values based on fiscal year values. The adjusted series is in Column Q.
spendingtogdp	Central government	From the Millennium data (Thomas and Dimsdale, 2017), use the government spending series (Sheet 'A27. Central govt

	primary spending to GDP ratio	borrowing ' series *Expenditure net interest (Column C minus Column H*) divided by nominal GDP (Sheet ' A9. Nominal GDP (A) ' Column D *Market prices*). We did the same fiscal year adjustment as described above. The fiscal-year adjusted series is in Column O.
stockindex	Log of the UK stock market price index	From the Millennium data (Thomas and Dimsdale, 2017), use (Sheet ' A31. Interest rates & asset ps ' Column W series *Share price indices*). Take Natural log.
rate_10year	10 year UK government bond yield	From GFD data, use series *IGGBR10D(Close)*
short_r	UK short term interest rate	From the Millennium data (Thomas and Dimsdale, 2017), use (Sheet ' A31. Interest rates & asset ps ' Column F series *Prime Commercial Bill/Paper Rate*).
debttogdplevel	Market value of debt over GDP, based on (Ellison, and Scott 2020)	From Ellison and Scott (2020), aggregate all market values of individual UK gilts, then divided by nominal GDP (Millennium data (Thomas and Dimsdale, 2017) Sheet ' A9. Nominal GDP (A) ' Column D *Market prices*)
dy	Dividend yield of the stock market	For period 1700-1812 and 1813-1870, use Golez and Koudijs (2018); for 1871-1946, use JST data (Jordà, Schularick, and Alan (2017)) column AQ series *eq_dp.*
coin_bullion/debt	Bank of England stock of metal reserves over market value of debt	From the Millennium data (Thomas and Dimsdale, 2017), use (Sheet ' A23. Bank of England B'Sheet' Column G series *Coin and bullion*), divided by (Ellison and Scott 2020) aggregate market value of debt. Convert the *Coin and bullion* to millions.
debttogdp_mil	Market value of debt over GDP based on the Millennium data	From the Millennium data (Thomas and Dimsdale, 2017), use (Sheet ' A1. Headline series' Column BY series *A30a. National Debt Market values*)

data/main_VAR/ UK_source_post1946.xlsx

Variable Name	Description	Construction
inflation	Annual inflation	1946-1959: Fred Series CPIUKQ, Name *Consumer Price Index in the United Kingdom, Index 2015=100, Not Seasonally Adjusted,* Take log-differences of the Q4 numbers. 1960-1987: Fred Series GBRCPALTT01IXNBM, Name *Consumer Price Index of All Items in the United Kingdom, Index 2015=100, Monthly, Not Seasonally Adjusted.* Take log-differences of the M12 numbers. 1988-2020: UK ONS: Series L522, Series name *CPIH INDEX 00:*

		ALL ITEMS 2015=100 version 14-07-2021. Take the monthly numbers and take log-differences of the M12 numbers.
real gdp growth	Annual real GDP growth	1947-2016: From the Millennium data (Thomas and Dimsdale, 2017), take log difference of real GDP series (Sheet 'A8. UK Real GDP(A)' Column D). 2017-2020: UK ONS: Series IHYC, Series name *Gross Domestic Product (Expenditure) chained volume index: SA,* version 12-05-2021. Take log-difference.
nominal gdp growth	Annual nominal GDP growth	1947-2016: From the Millennium data (Thomas and Dimsdale, 2017), use nominal GDP (Sheet ' A9. Nominal GDP (A) ' Column D *Market prices*) and take log-difference. 2017-2020: UK ONS: Series BKTL, Series name *Gross Domestic Product at market prices: CP: NSA £m,* version 12-05-2021. Take log-difference
revenue	Central government revenue	1947-2016: From the Millennium data (Thomas and Dimsdale, 2017), use the government revenue series (Sheet 'A27. Central govt borrowing ' series ANBV) divided by nominal GDP (Sheet ' A9. Nominal GDP (A) ' Column D Market prices). Note that our government revenue series is adjusted for the difference between fiscal year and calendar year, assuming the annual revenue is equally distributed in each quarter of a fiscal year, and calculating calendar year values based on fiscal year values. The adjusted series is in Column Q. 2017:2020: UK ONS: General government main aggregates: ESA Table 2. version 27-07-2021. Data field '*Total Revenue*'.
spending	Central government primary spending	1947-2016: From the Millennium data (Thomas and Dimsdale, 2017), use the government spending series (Sheet 'A27. Central govt borrowing ' series Expenditure Column C net of interest payments in Column H) divided by nominal GDP (Sheet ' A9. Nominal GDP (A) ' Column D Market prices). Note that our government expenditure series is adjusted for the difference between fiscal year and calendar year, assuming the annual expenditure is equally distributed in each quarter of a fiscal year, and calculating calendar year values based on fiscal year values. The adjusted series is in Column O. 2017:2020: UK ONS: General government main aggregates: ESA Table 2. version 27-07-2021. Data field '*Total expenditure*' minus *'- Interest, payable(1)'* plus *'Interest, receivable(1)'*.
revtogdp	Central government revenue over GDP	Use revenue divided by the nominal GDP as in nominal gdp growth (Millennium data Sheet ' A9. Nominal GDP (A) ' Column D *Market prices*).
spendingtogdp	Central government	Use spending divided by the nominal GDP as in nominal gdp growth (Millennium data Sheet ' A9. Nominal GDP (A) ' Column

	primary spending over GDP	D *Market prices*).
surplustogdp	Central government primary surplus over GDP	revtogdp minus spendingtogdp
stockindex	Log of the price index for the UK stock market	1947-2016: From the Millennium data (Thomas and Dimsdale, 2017), use (Sheet ' A31. Interest rates & asset ps ' Column W series Share price indices). Take natural log. 2017:2020: Datastream Terminal series 'FTALLSH', Datapoint 'PI'. Take natural log.
rate_10year	long term yield (10 year)	GFD series 'IGGBR10D'
short_r	short term yield	1947-2016: From the Millennium data (Thomas and Dimsdale, 2017), use (Sheet ' A31. Interest rates & asset ps ' Column F series Prime Commercial Bill/Paper Rate). 2017-2020: Fred Series 'GBP3MTD156N', name '*3-Month London Interbank Offered Rate (LIBOR), based on British Pound, Percent, Daily, Not Seasonally Adjusted*'. First calculate annual average, then take difference and add to the 2016 value from the above source.
yspread	yield spread	rate_10year minus short_r
debttogdplevel	Market value of debt over GDP, based on (Ellison, and Scott 2020)	1947-2016: From (Ellison and Scott 2020), aggregate all market values of individual UK gilts, then divided by nominal GDP (Millennium data Sheet ' A9. Nominal GDP (A) ' Column D Market prices) 2017-2020: Fred series '*GGGDTAGBA188N*', calculate growth rate from previous year, then use 2016 value to compute forward
dy	dividend yield on the stock market	1947-2015: JST data (Jordà, Schularick, and Alan (2017)) series 'eq_dp' 2016-2020: Datastream Terminal series 'FTALLSH', Datapoint 'DY'.
debttogdp_mil	Market value of debt over GDP based on the Millennium data	From the Millennium data (Thomas and Dimsdale, 2017), use (Sheet ' A1. Headline series' Column BY series *A30a. National Debt Market values*)

data/main_VAR/ US_source_pre1929.xlsx

Variable Name	Description	Construction
tau	Central government revenue -to-GDP ratio	Hall and Sargent (2021), column *Net OrdinaryReceipts*, divided by Williamson (2021) column *Nominal GDP (millions of Dollars)*

g	Central government primary spending -to-GDP ratio	Hall and Sargent (2021), column *net ordinary expend*, divided by Williamson (2021) column *Nominal GDP (millions of Dollars)*
s	Central government primary surplus-to-GDP ratio	tau minus g
x	annual real GDP growth	Williamson (2021) column *Real GDP (million of Dollars),* take log difference.
pi	annual inflation	GFD series CPUSAM, take log-difference
1yr CMT	short term interest rate (1 year)	1790-1869: GFD series TRUSABIM (USA Total Return T-Bill Index). The 1yr CMT is calculated as the growth of the T-Bill index. 1870-1929: JST series *stir*
10yr CMT	long term interest rate (10 year)	GFD series IGUSA10D (USA 10-year Bond Constant Maturity Yield).
pdm	Log price_dividend ratio of the stock market	We calculate the logarithm of the inverse of the GFD series SYUSAYM (S&P 500 Monthly Dividend Yield) after scaling the inversed value by a factor of 100. The value used corresponds to the end-of-year observation.
divgrm	annual dividend growth	For 1791-1871, use GFD series GFUS100MPM (USA Top 100 Price Index) as price index, and combine with Price/Dividend ratio (SYUSAYM) to calculate dividend growth. For post 1872, use GFD series SPXTRD (S&P 500 Total Return Index) as a total return index, and combine with Price/Dividend ratio (SYUSAYM) to calculate dividend growth.
debt_gdp_sargenthall	market value of debt over GDP	Market value of marketable debt from Hall, Payne and Sargent "US Federal Debt 1776-1960: Quantities and Prices" divided by GDPUSA from GFD.

data/main_VAR/ US_source_post1929.xlsx

Variable	Description	Construction
tau	Tax revenue to GDP ratio	NIPA Table 3.2 Line 1 divided by NIPA Table 1.1.5 Line 1

g	Government spending to GDP ratio	NIPA Table 3.2 Line 24 minus interest payment (Line 33-Line14) divided by NIPA Table 1.1.5 Line 1
x	Real GDP growth	Log change of NIPA Table 1.1.5 Line 1 minus the log change of NIPA Table 1.1.4 Line 1
Column F pi	Inflation	Log change of NIPA Table 1.1.4 Line 1
Column I y1	Short rate	1-year CMT from Global Financial Database. Ticker (IGUSA1D) for 1940-2020; 1-year CMT from 1929 to 1939 is from Global Financial Database 3-month CMT (ITUSA3CM)
Column L Y10	10-year yields	10-year CMT from Global Financial Database. Ticker IGUSA10D
Column N pdm	Price-dividend ratio	Data/code_for_data_construction/CRSP/equity moment/createpdratiostocks_Nov2021.m produces this variable. The source data is from CRSP Stock file through WRDS. After logging into WRDS, please go to CRSP -> Annual Update -> Stock/Security Files -> Monthly Stock File. Select and download all variables.
Column O divgrm	Dividend growth	Data/code_for_data_construction/CRSP/equity moment/createpdratiostocks_Nov2021.m produces this variable. The source data is from CRSP Stock file retrieved from WRDS. See above for detailed instruction of retrieving data.
Column Q Debt/GDP ratio	Debt/GDP ratio	Market value of marketable debt from Hall, Payne and Sargent "US Federal Debt 1776-1960: Quantities and Prices" divided by GDP from Global Financial Database (Series GDPUSA).

data/Netherlands/Holland_PF_v2.xlsx

Variable Name	Description	Construction
Pi	Annual inflation	Van Zanden and Van Leeuwen (2016), sheet overzicht *(1750-1807)*, series 'corrected GDP deflator. Take log difference.
x	Annual Real GDP growth	Van Zanden and Van Leeuwen (2016), sheet *overzicht (1750-1807)*, series 'Constant 1800 prijzen GDP'. Take log difference.
tau	Government	For government revenue, use Liesker and Fritschy (2004) File

	Revenue to GDP for the province of Holland	*4RevProvGnrltAdm2017.xlsx,* sheet H-def column *total public revenue (excl loans).* For nominal GDP, use Van Zanden[15-05-2016], sheet *overzicht (1750-1807)*, column *Totaal.* Dividing these two to get the ratio.
g	Government expenditure to GDP for the province of Holland	For government expenditure, use the sum of (1) Liesker and Fritschy (2004), File *2GenExp2017.xlsx*, sheet HGE, column *Total 'general' expenditure* minus column and (2) Liesker and Fritschy (2004), File *3ProvExp2017.xlsx*, sheet HPE, column *provincial expenditure excl. debt service*. For nominal GDP, use Van Zanden and Van Leeuwen (2016), sheet *overzicht (1750-1807)*, column *Totaal.* Dividing these two to get the ratio.
y10	After-tax annuity yield	We asked for long term yield data from Korevaar, Francke, and Eichholtz, 2021.
debt_gdp	book value of Holland debt over GDP	For debt level, use Fritschy 2017, File *1TotPubFin2017.xlsx*, sheet debt Holl, series *Total debt (*1000).* For nominal GDP, use Van Zanden and Van Leeuwen (2016), sheet *overzicht (1750-1807)*, column *Totaal.* Dividing these two to get the ratio.
Dy	dividend yield	Golez and Koudijs (2018) for pre-1812, column D_real over P real. We use 10-year rolling average of D_real because of the frequent 0 dividends in the data.
Divgrm	Real Dividend growth	Golez and Koudijs (2018) for pre-1812, take log-difference of 10-year rolling average of column D_real.
debt_gdp_mkt	Market value of Holland debt over GDP	We use the number in Figure 4 in Gelderblom and Jonker (2006) (market price of annuities) to apply to the book value of debt.

data/Netherlands/NetherlandsPF_1815_1938.xlsx

Variable Name	Description	Construction
Pi	Annual inflation	Take log difference of the GDP price deflator below.
GDP price deflator	GDP deflator	1815-1912: Smits, Horlings, and van Zanden (2000), sheet name *definitieve reeksen sna,* column *deflators, output. https://nationalaccounts.niwi.knaw.nl/table/hna-definitieve-reeksen.xls* 1913-1939: estimate the GDP deflator by dividing the nominal GDP from GFD (series GDPNLD) by the real GDP from GFD (series GDPCNLD).
x	Annual Real GDP growth	1815-1912: take log difference of the nominal GDP below, then subtract inflation above. 1913-1939: take log difference of the norminal GDP from GFD series GDPNLD and then subtract the inflation Pi over the same time period.
tau	Government	Take variable *Tax revenue* divided by nominal GDP below

	Revenue to GDP	
g	Government primary spending to GDP	Take variable *Spending (excl Interest)* divided by nominal GDP below
y10	Long yield	Centraal Bureau voor de Statistiek (2001), Tweehonderd jaar statistiek in tijdreeksen 1800-1999, page 100, Table 10. http://www.cbs.nl/NR/rdonlyres/7934A2DE-B87C-4CDF-8BC7-D34F02225620/0/200jaarstattijdreeksen.pdf
y1	Short yield	Centraal Bureau voor de Statistiek (2001), Tweehonderd jaar statistiek in tijdreeksen 1800-1999, page 100, Table 10. http://www.cbs.nl/NR/rdonlyres/7934A2DE-B87C-4CDF-8BC7-D34F02225620/0/200jaarstattijdreeksen.pdf
debt_gdp	Book value of debt over GDP	1815-1913: Kindly provided to us by van Riel (2021) 1914-1939: Global Financial Database series GVDPNLD
GDP	Nominal GDP	Smits, Horlings, and van Zanden (2000), sheet name *definitieve reeksen sna,* column GDP
GDP (GFD)	Nominal GDP (alternative measure)	GFD series GDPNLD
GDP real (GFD)	Real GDP	GFD series GDPCNLD
Tax revenue	Tax Revenue	Centraal Bureau voor de Statistiek (2001), Tweehonderd jaar statistiek in tijdreeksen 1800-1999, page 69, Table 8. http://www.cbs.nl/NR/rdonlyres/7934A2DE-B87C-4CDF-8BC7-D34F02225620/0/200jaarstattijdreeksen.pdf
Spending (excl Interest)	Primary Spending	Centraal Bureau voor de Statistiek (2001), Tweehonderd jaar statistiek in tijdreeksen 1800-1999, page 69, Table 8. http://www.cbs.nl/NR/rdonlyres/7934A2DE-B87C-4CDF-8BC7-D34F02225620/0/200jaarstattijdreeksen.pdf

Supplement Dataset:

These data are supplementary and not used in the main fiscal backing estimation exercise.

For the data under the folder **Data/supplement/**:

Data File Name	Description	Construction
UK_bc.xlsx	UK business cycle indicators, used for	UK Business and Financial Cycles Since 1660, Volume I, A Narrative Overview. Nicholas Dimsdale · Ryland

	plots	Thomas. Table 5.1 Page 72. https://link.springer.com/book/10.1007/978-3-030-26346-11
UK_cony.xlsx	The spreadsheet calculating the UK convenience yield pre-1946	Using the JST data (Jordà, Schularick, and Alan (2017)), at each year take the difference of interest rates between the UK and countries that had a gold standard, .For the years that the UK was not in the gold standard, the convenience yield is 0.
US_bc_Davis2006.xlsx	US business cycle indicators	Directly from paper: https://www.jstor.org/stable/3875107?seq=4 Davis(2006) Table 1.
US_convyield.mat	The US convenience data	Directly taken from (Jiang et al 2024)
US_Treasury_Debt_1776_2018.xlsx	The US marketable debt 1776-2018	Hall, Payne and Sargent "US Federal Debt 1776-1960: Quantities and Prices"
USGDP_1790_2020.xlsx	The US nominal GDP 1790-2020	Samuel H. Williamson, 'What Was the U.S. GDP Then?' MeasuringWorth, 2021.
govdebt.xlsx	Alternative measure for the market value of US government debt	Dallas fed: https://www.dallasfed.org/research/econdata/govdebt#data
UKgiltreturn.xlsx	The UK government bond return	From (Ellison and Scott 2020), use individual gilt's price and dividend to calculate each bond's return, then take value weighted average.
UK_consumption.xlsx	the UK consumption data, used to estimate the consumption betas in the appendix	Post 1830: Real Consumption Expenditures in the United Kingdom, Millions of Chained 2013 British Pounds, Annual, Not Seasonally Adjusted. Fred data: RLCMEXUKA Pre 1830: Imputed from GDP minus the sum of capital formation and government spending from the Millennium data
US_consumption.xlsx	the US consumption data, used to estimate the consumption betas in the appendix	From the JST data, use population times per capita consumption

For the data under the folder **Data/UK_colony/**:

Data File Name	Description	Construction
colonial_debt_cleaned.xls	Debt and nominal gdp for countries that were once British colonies: India, South Africa,	We collect GDP, government debt and exchange rate data from the Global Financial Data. The GDP data have tickers GDPCAN, GDPIND, GDPNZL, GDPAUS, GDPCZAF.

	Australia, New Zealand, Canada	The debt data have tickers GVDCZAF, GVDCCAN, GVDCNZL, GVDCIND, GVDCAUS. FX data have ticker ZARGBP, GBPINR, CADGBP, AUDGBP, NZDUSD，GBPUSD
colony_surplus.xlsx	Government revenue and spending data from Xu (2018) http://doi.org/10.3886/E113197V1	We map the colonies to the current countries. For details, see Data Appendix.
colony_average_surplus.xlsx	GDP weighted average of colonial government revenue and spending (not including India)	Direct calculation from the above two data.
India.xlsx	Colonial government revenue and expenditure for British India	Directly retrieved from *Statistical Abstract of British India.* For details, see the online Data Appendix. https://dsal.uchicago.edu/statistics/

Supplementary Codes for Data Construction

a. Debt/GDP for UK: From Ellison and Scott (2020), aggregate all market values of individual UK gilts (series in Sheet ElisonScottDebt), then divided by nominal GDP (Millennium data (Thomas and Dimsdale, 2017) Sheet ' A9. Nominal GDP (A) ' Column D *Market prices*). This code constructs the series in sheet "ElisonScottDebt":
   data/code_for_data_construction/UK/clean_gilts_data_new.py
   This code construct the series in UKgiltreturn.xlsx:
   data/code_for_data_construction/UK/calculate return.py

b. Price/Dividend Ratio and Dividend Growth for the U.S. sample 1929-2020: The source data is from CRSP Stock file through WRDS. After logging into WRDS, please go to CRSP -> Annual Update -> Stock/Security Files -> Monthly Stock File. Select and download all variables. This code produces the two variables:
   data/code_for_data_construction/CRSP/equity moment/createpdratiostocks_Nov2021.m.

c. The risk premium data in Table 2 is generated in the following file:
   code\summarystats\WACC_UK.xlsx
   code\summarystats\WACC_US.xlsx

Summary of Raw Data Sources and URLs

1. Thomas, R and Dimsdale, N (2017) "A Millennium of Macroeconomic Data for the UK ", Bank of England OBRA dataset. https://www.bankofengland.co.uk/-/media/boe/files/statistics/research-datasets/a-millennium-of-macroeconomic-data-for-the-uk.xlsx
2. Òscar Jordà, Moritz Schularick, and Alan M. Taylor. 2017. "Macrofinancial History and the New Business Cycle Facts." in *NBER Macroeconomics Annual 2016*, volume 31, edited by Martin Eichenbaum and Jonathan A. Parker. Chicago: University of Chicago Press.
   https://www.macrohistory.net/database/
3. Samuel H. Williamson, 'What Was the U.S. GDP Then?' MeasuringWorth, 2021.
4. Zanden, Jan Luiten van and Leeuwen, Bas van, Reconstruction National Accounts of Holland, 1500-1800, 2016
   https://i-lab.public.data.uu.nl/vault-national-accounts-holland/National%20Accounts%20Holland%5B1529474523%5D/original/whole%20economy%20of%20Holland/
5. Liesker, R., and W. Fritschy, 2004, Gewestelijke Financiën ten tijde van de Republiek der Verenigde Nederlanden 1572-1795 (Provincial Finances of the Dutch Republic 1572-1795), Instituut voor de Nederlandse Geschiedenis, Den Haag.
   Data link:
   https://resources.huygens.knaw.nl/gewestelijkefinancien/Spreadsheets
6. Office for National Statistics Series,
   a. Post 2016 Government Cash Flow:
   https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicspending/datasets/esatable2mainaggregatesofgeneralgovernment
   b. UK Post 2016 GDP data source:
   https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/secondestimateofgdp
   c. Inflation:
   https://www.ons.gov.uk/economy/inflationandpriceindices/timeseries/l522/mm23
7. Ellison and Scott (2020) debt value data source link:
   https://www.aeaweb.org/journals/dataset?id=10.1257/mac.20180263
8. Data retrieved from the FRED:
   a. series 'GGGDTAGBA188N'
   https://fred.stlouisfed.org/series/GGGDTAGBA188N
   b. series CPIUKQ

Consumer Price Index in the United Kingdom (CPIUKQ) | FRED | St. Louis Fed

c. series GBRCPALTT01IXNBM

Consumer Price Index: All Items: Total for United Kingdom (GBRCPALTT01IXNBM) | FRED | St. Louis Fed

9. G.J. Hall, T.J. Sargent, Three world wars: Fiscal–monetary consequences, *Proc. Natl. Acad. Sci. U.S.A.*119 (18) e2200349119, https://doi.org/10.1073/pnas.2200349119 (2022).
   U.S. government finance data link: https://drive.google.com/file/d/1VCPMtWumf4tXJfeqIQNZVFgbv0HqeOXt/view
10. Hall, Payne and Sargent "US Federal Debt 1776-1960: Quantities and Prices". Data link: https://github.com/jepayne/US-Federal-Debt-Public
11. Dimsdale, Nicholas and Ryland Thomas, UK Business and Financial Cycles Since 1660, Volume I, A Narrative Overview. Table 5.1 Page 72.
12. Dutch GNP and its components, 1800-1913
    https://nationalaccounts.niwi.knaw.nl/table/hna-definitieve-reeksen.xls
13. Global Financial Database (GFD): https://globalfinancialdata.com/
14. Datastream: https://www.thomsonreuters.com/content/dam/openweb/documents/pdf/tr-com-financial/fact-sheet/datastream-economics-fact-sheet.pdf
15. CRSP from WRDS https://wrds-www.wharton.upenn.edu/pages/about/data-vendors/center-for-research-in-security-prices-crsp/
16. Centraal Bureau voor de Statistiek (2001), Tweehonderd jaar statistiek in tijdreeksen 1800-1999, page 69. http://www.cbs.nl/NR/rdonlyres/7934A2DE-B87C-4CDF-8BC7-D34F02225620/0/200jaarstattijdreeksen.pdf

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