

Regression analysis of changes in dynamic of
leading world development indicators since 2020,
when COVID-19 pandemic started.

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Motivation

Covid-19 pandemic:

- lockdown and less production
- less international trade
- business debt and bankruptcy
- more unemployment

Ukraine war:

- rise of energy prices
- inflation
- Russian international relationships
- Ukraine is one of the leading cereals producers
- international financial support

Data

Countries:

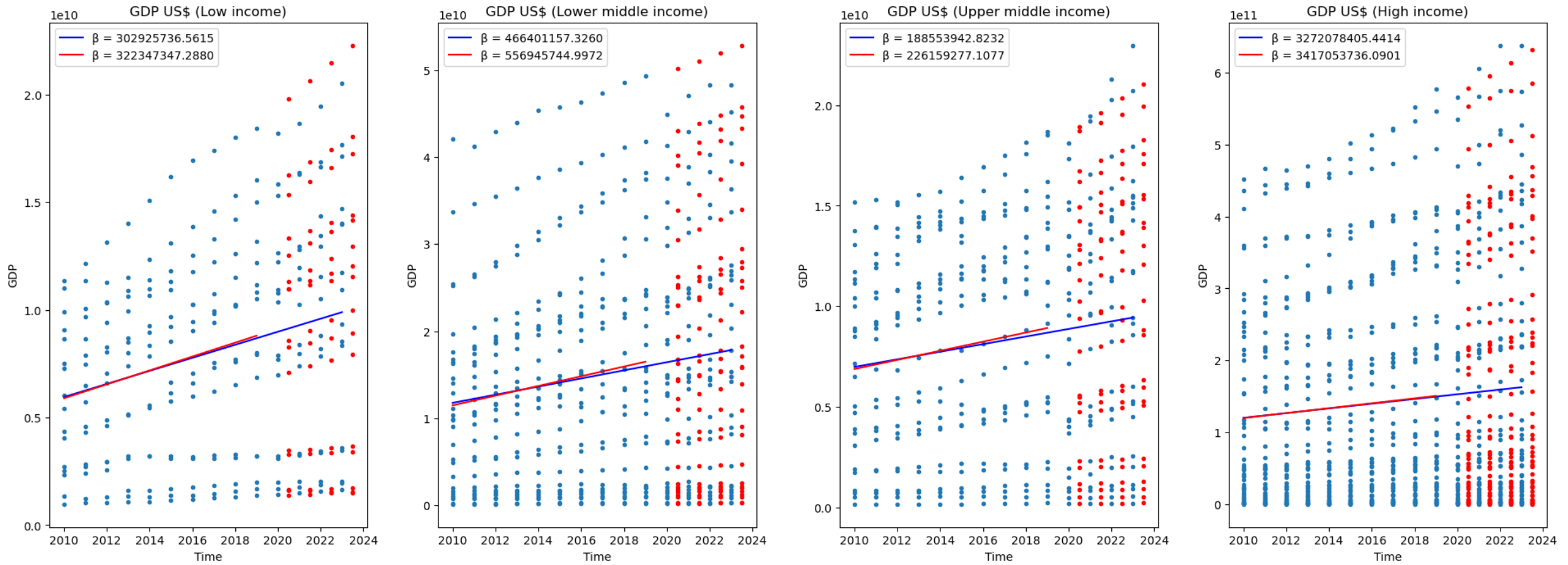
- Low income
- Lower middle income
- Upper middle income
- High income

Indicators:

- Gross domestic product
- Exports of goods and services
- Imports of goods and services
- Households and NPISHs final consumption expenditure
- General government final consumption expenditure
- Foreign direct investment, net inflows
- Consumer price index
- Unemployment
- Real interest rate

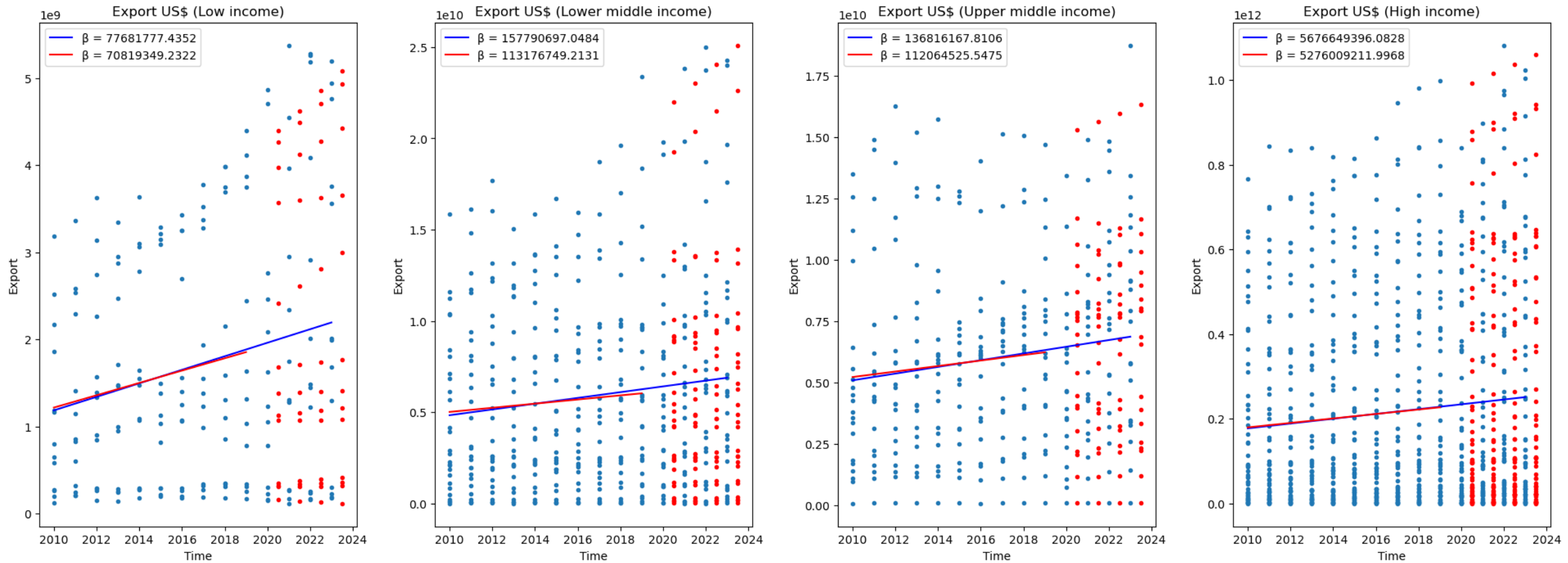
Years: 2010-2023

Data from database: World Development Indicators



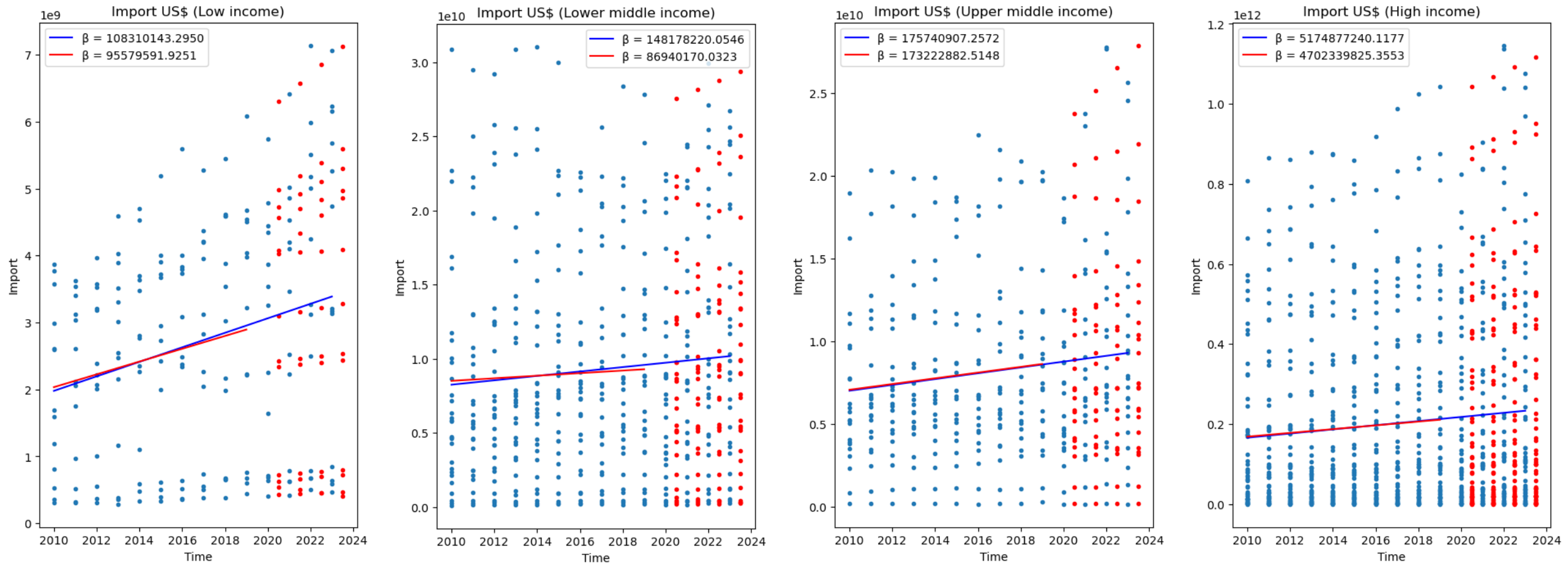
GDP (constant 2015 US\$)

GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. Data are in constant 2015 prices, expressed in U.S. dollars.



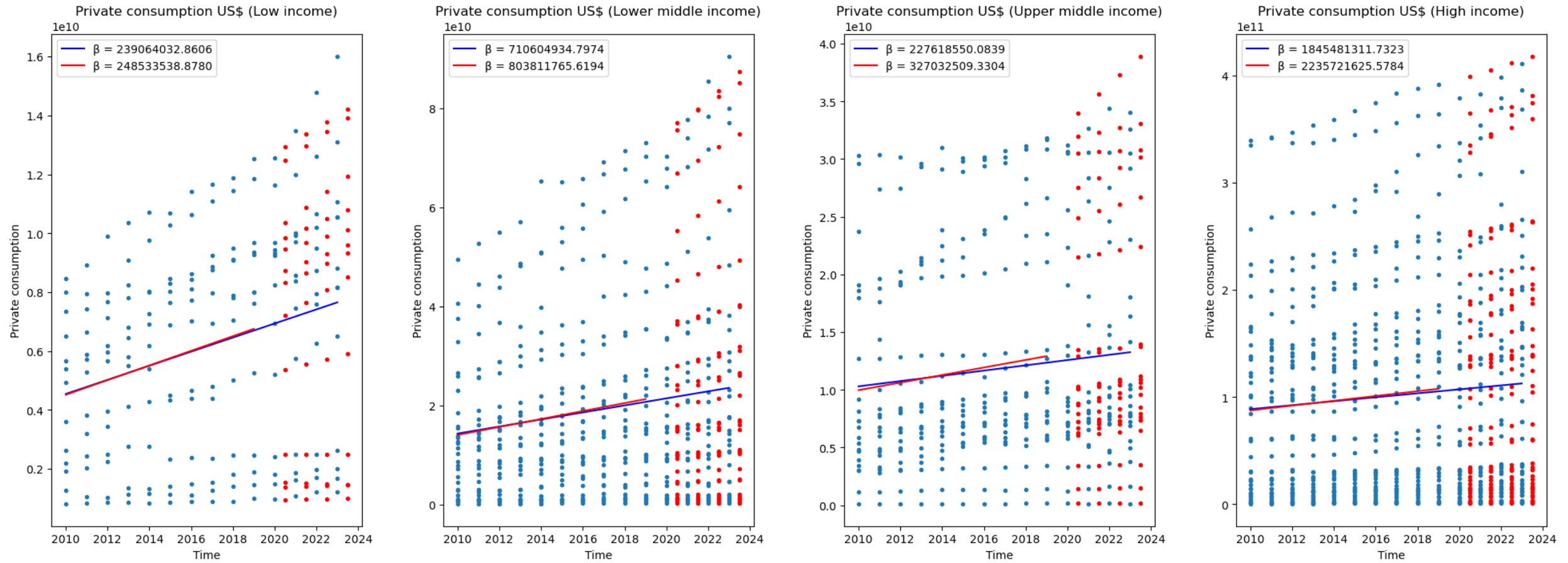
Exports of goods and services (constant 2015 US\$)

Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.



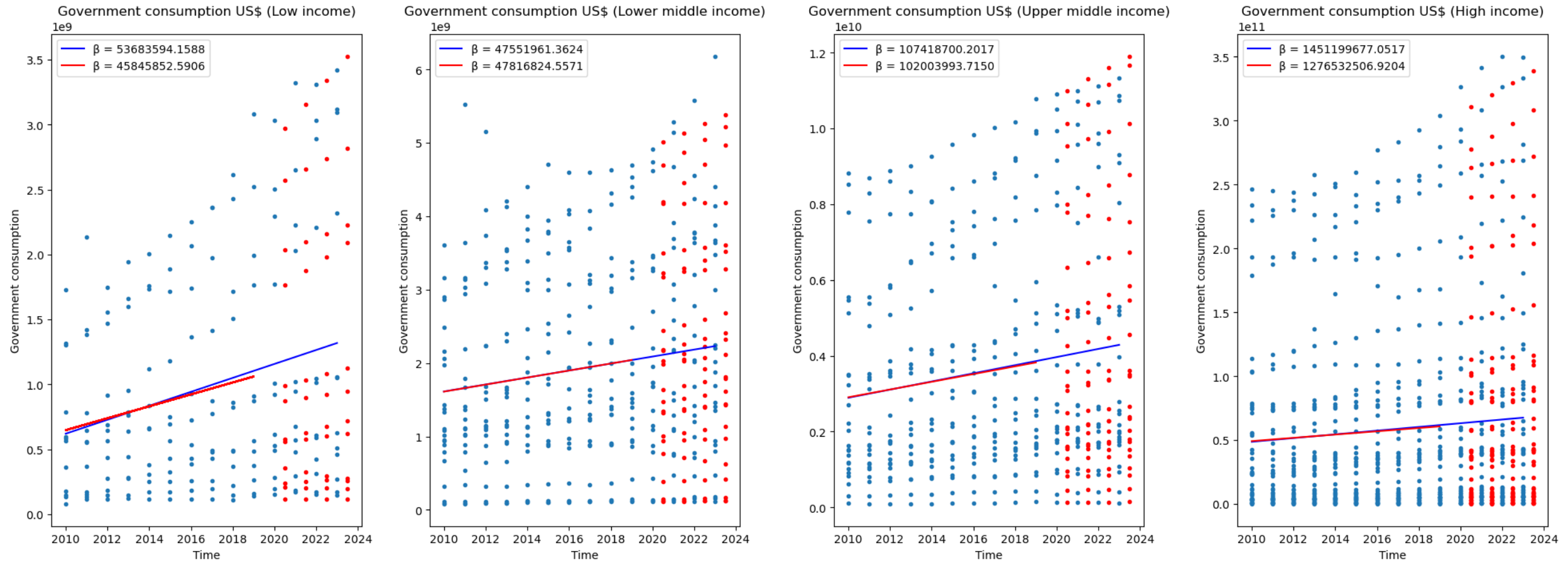
Imports of goods and services (constant 2015 US\$)

Imports of goods and services represent the value of all goods and other market services received from the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.



Households and NPISHs final consumption expenditure (constant 2015 US\$)

Household final consumption expenditure (formerly private consumption) is the market value of all goods and services, including durable products (such as cars, washing machines, and home computers), purchased by households. It excludes purchases of dwellings but includes imputed rent for owner-occupied dwellings. It also includes payments and fees to governments to obtain permits and licenses. Here, household consumption expenditure includes the expenditures of nonprofit institutions serving households, even when reported separately by the country. This item also includes any statistical discrepancy in the use of resources relative to the supply of resources.



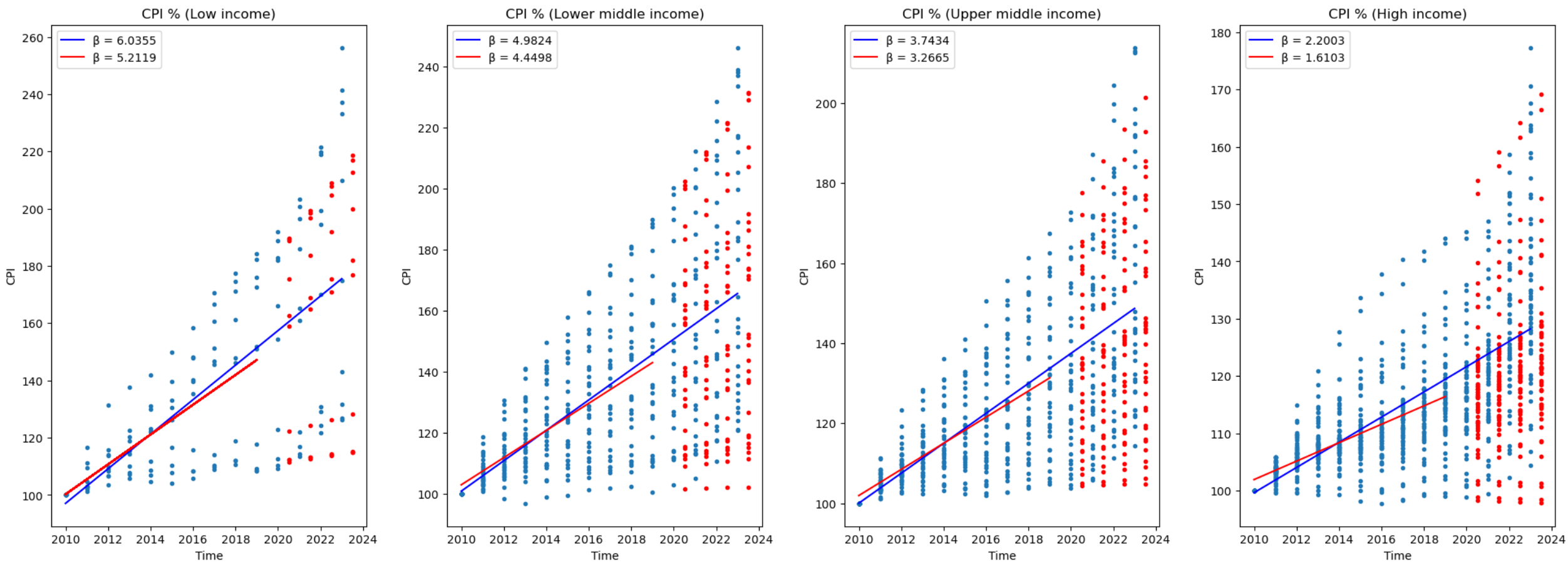
General government final consumption expenditure (constant 2015 US\$)

General government final consumption expenditure (formerly general government consumption) includes all government current expenditures for purchases of goods and services (including compensation of employees). It also includes most expenditures on national defense and security, but excludes government military expenditures that are part of government capital formation.



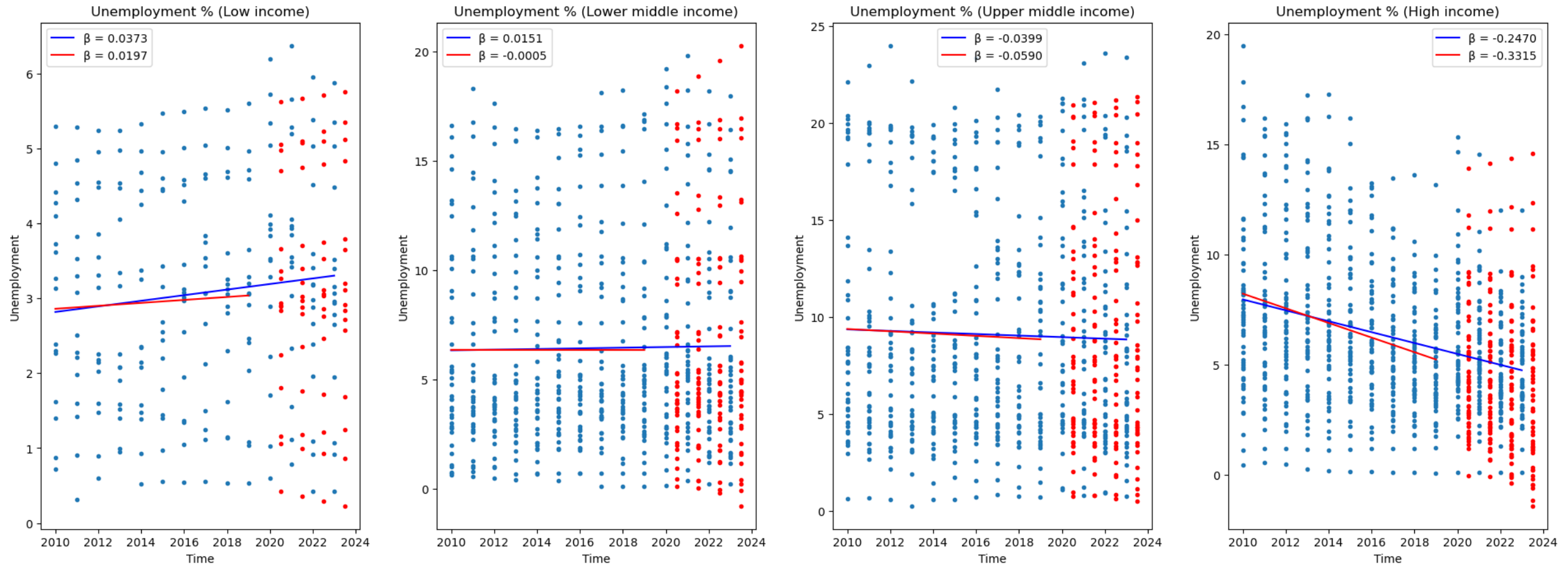
Foreign direct investment, net inflows (constant 2015 US\$)

Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors.



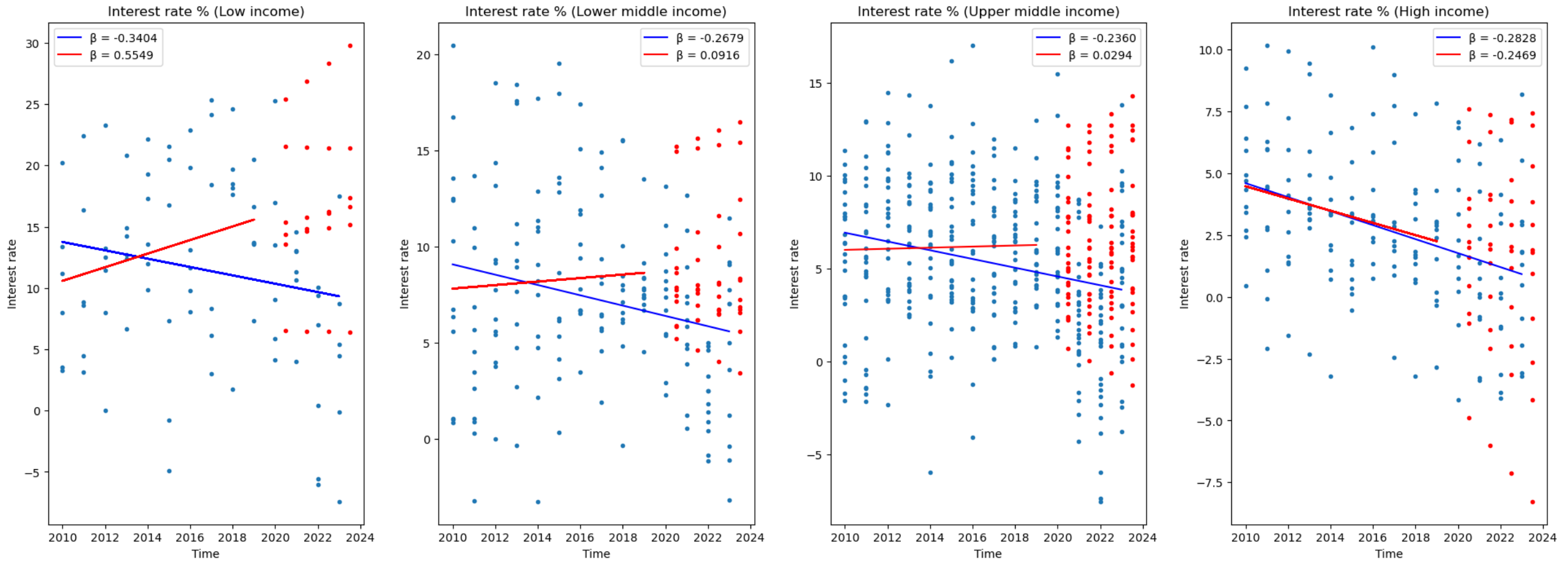
Consumer price index (2010 = 100)

Consumer price index reflects changes in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. The Laspeyres formula is generally used. Data are period averages.



Unemployment, total (% of total labor force) (modeled ILO estimate)

Unemployment refers to the share of the labor force that is without work but available for and seeking employment. Modeled ILO (International Labour Organization) estimate.



Real interest rate (%)

Real interest rate is the lending interest rate adjusted for inflation as measured by the GDP deflator. The terms and conditions attached to lending rates differ by country, however, limiting their comparability.

Results

Percentage change of regression coefficients: $(\beta_{2023} - \beta_{2019}) / |\beta_{2019}| * 100 \%$

