

	Dependent Variable: Trade Flow		
	Model 1	Model 2	Model 3
<i>UNGA</i>	-191.085	-118.1656	-160.0354
<i>FDI</i>	-3.6239***	3.97***	2.776***
<i>Portfolio Flows</i>	6.7278***	4.8548***	5.1614***
<i>Tariff</i>	-8.2302**	-2.3889**	-11.3663**
<i>RTA (Cumulative)</i>	2.2103***	2.2064***	1.5276***
<i>WTO Membership</i>	-5.0013	2.2179	-1.8885
<i>One-Way Preferential Trade</i>			-37.2488
<i>Two-Way Preferential Trade</i>			210.0557
<i>Free Trade Agreement</i>			-124.1977
<i>Customs Union</i>			-171.448
<i>Economic Union</i>			-2.3059
<i>Military Spending</i>		3185.9105	2128.6248
<i>MATR</i>	-0.223***	1.1613***	0.9803***
<i>Migrant Population</i>		0.8135***	1.3408***
<i>Health Expenditure</i>		-11.8007	-9.7331*
<i>GDP</i>	-4.2825***	-9.1476***	-1.312***
<i>GDP Growth</i>	3.4882**	-0.0992**	1.6556**
<i>Population Growth</i>	0.6342	0.3681	-9.8994
<i>Real Interest Rate</i>	1.5133***	0.7035***	1.2833***
<i>Deposit Rate</i>	-5.0864***	-2.7452***	-2.4111***
<i>Exchange Rate</i>	0.0257***	0.0007***	0.0233***
<i>Inflation</i>	3.1638***	1.1063***	1.6842***
<i>Political Stability</i>	78.563	65.2089	59.9444
<i>2008-2010</i>	5.3801	-6.5259	-10.5478
<i>2010-2015</i>	-16.7738	-7.64893	-12.3518
<i>2019-2020</i>	-31.8118	-22.7937	
<i>R-squared</i>	0.83306	0.90435	0.884713

Note: \* $P < 0.05$  ; \*\* $p < 0.01$  ; \*\*\* $p < 0.001$

	Dependent Variable: RTA (Cumulative)		
	Model 1	Model 2	Model 3
<i>UNGA</i>	30.1299	31.759	10.8631
<i>Trade Flow</i>	0.0772***	0.09138***	0.0342***
<i>FDI</i>	2.1859***	1.9542***	1.6972***
<i>Portfolio Flows</i>	2.8364***	-4.4871***	4.0224***
<i>Tariff</i>	0.0848**	0.09**	-0.6492**
<i>WTO Membership</i>	-1.8627	-1.6732	8.3626
<i>One-Way Preferential Trade</i>			17.6301
<i>Two-Way Preferential Trade</i>			135.0517
<i>Free Trade Agreement</i>			1.7739
<i>Customs Union</i>			84.2258
<i>Economic Union</i>			1.6769
<i>Military Spending</i>		-957.9505	-236.114
<i>MATR</i>	0.0687***	0.1555***	0.1302***
<i>Migrant Population</i>		0.099***	0.1178***
<i>Health Expenditure</i>		-2.8175	-0.7395*
<i>GDP</i>	7.0835***	1.9029***	5.0791***
<i>GDP Growth</i>	-0.6678*	-0.4456**	-0.0125**
<i>Population Growth</i>	-1.9658	-1.2126	-0.4269
<i>Real Interest Rate</i>	0.04537***	0.2096***	0.041***
<i>Deposit Rate</i>	0.0056***	-0.4097***	0.2039***
<i>Exchange Rate</i>	-0.0012***	0.0063***	0.0038***
<i>Inflation</i>	-0.6592***	-0.4381***	-0.3193***
<i>Political Stability</i>	6.2061	-5.2667	1.5075
<i>2008-2010</i>	2.5727	2.4959	1.6545
<i>2010-2015</i>	5.8217	2.2785	0.5094
<i>2019-2020</i>	7.0003	8.2845	
<i>R-squared</i>	0.66128	0.76982	0.81825

Note: \* $P < 0.05$  ; \*\* $p < 0.01$  ; \*\*\* $p < 0.001$

	Dependent Variable: UNGA		
	Model 1	Model 2	Model 3
<i>Trade Flow</i>	-0.0016***	-0.0015***	-0.0016***
<i>FDI</i>	1.6867***	1.1894***	4.222***
<i>Portfolio Flows</i>	-9.1685***	-2.798***	-1.7164***
<i>Tariff</i>	-0.0205**	-0.0232**	-0.0375**
<i>RTA (Cumulative)</i>	0.0077***	0.0099***	0.0048***
<i>WTO Membership</i>		4.8152	7.1561
<i>One-Way Preferential Trade</i>			-0.9324
<i>Two-Way Preferential Trade</i>			1.3197
<i>Free Trade Agreement</i>			-0.6679
<i>Customs Union</i>			-8.1485
<i>Economic Union</i>			-3.148
<i>Military Spending</i>		12.0576	2.3115
<i>MATR</i>	-0.0068***	-0.0092***	-0.0046***
<i>Migrant Population</i>		-0.0054***	0.0025***
<i>Health Expenditure</i>		0.0494	0.0361*
<i>GDP</i>	4.9717***	2.5766***	-2.3263***
<i>GDP Growth</i>	0.0042**	0.0046**	0.0087**
<i>Population Growth</i>	-0.1004	-0.0759	-0.0425
<i>Real Interest Rate</i>	0.0004***	-0.0029***	0.0008***
<i>Deposit Rate</i>	-0.0084***	-0.0002***	-0.0037***
<i>Exchange Rate</i>	7.7694***	-2.3464***	-1.8355***
<i>Inflation</i>	0.0099***	0.0074***	0.009***
<i>Political Stability</i>	0.1949	0.1849	0.0156
<i>2008-2010</i>	-0.0262	-0.0242	-0.0187
<i>2010-2015</i>	-0.0723	-0.0363	-0.0837
<i>2019-2020</i>	-0.0972	-0.1314	
<i>R-squared</i>	0.8273	0.8556	0.88835

Note: \* $P < 0.05$  ; \*\* $p < 0.01$  ; \*\*\* $p < 0.001$

	Dependent Variable: Military Spending		
	Model 1	Model 2	Model 3
<i>Trade Flow</i>	7.9021***	3.6064***	2.8212***
<i>FDI</i>	-9.8611***	-2.4694***	2.5599***
<i>Portfolio Flows</i>	-3.1013***	-4.8727***	-5.4849***
<i>Tariff</i>	-0.0003**	0.0002**	0.0006**
<i>RTA (Cumulative)</i>	-0.0003***	-0.0003***	-0.0001***
<i>WTO Membership</i>	1.442	-7.752	-2.782
<i>One-Way Preferential Trade</i>			0.0011
<i>Two-Way Preferential Trade</i>			-0.0115
<i>Free Trade Agreement</i>			0.00286
<i>Customs Union</i>			0.202
<i>Economic Union</i>			-5.4966
<i>UNGA</i>	0.0078	0.0105	0.0033
<i>MATR</i>	-9.9337***	0.0001***	0.0001***
<i>Migrant Population</i>		0.0004***	0.0004***
<i>Health Expenditure</i>		-0.0018	-0.0018*
<i>GDP</i>	-1.5612***	-1.3243***	-6.2447***
<i>GDP Growth</i>	0.0003**	0.0001**	6.5262**
<i>Population Growth</i>	-9.0269	-0.001	-0.0006
<i>Real Interest Rate</i>	0.0001***	0.0002***	0.0002***
<i>Deposit Rate</i>	-0.0003***	-0.0005***	-0.0003***
<i>Exchange Rate</i>	5.9437***	6.1214***	5.772***
<i>Inflation</i>	0.0001***	0.0002***	6.2743***
<i>Political Stability</i>	-0.0037	-0.0042	-0.0032
<i>2008-2010</i>	0.0017	0.0008	0.0002
<i>2010-2015</i>	-0.0013	-0.0016	-0.001
<i>2019-2020</i>	0.0027	0.0034	
<i>R-squared</i>	0.78528	0.86361	0.87424

Note: \* $P < 0.05$  ; \*\* $p < 0.01$  ; \*\*\* $p < 0.001$

The following tables are shortened for the poster, so that we can add the standard error of coefficients.

	Dependent Variable: Trade Flow		
	Model 1	Model 2	Model 3
<i>UNGA</i>	-191.085 (-639.4736)	-118.1656 (-395.4462)	-160.0354 (-614.392)
<i>FDI</i>	-3.6239*** (-1.928)	3.97*** (2.1122)	2.776*** (8.5688)
<i>Portfolio Flows</i>	6.7278*** (3.0328)	4.8548*** (2.1884)	5.1614*** (9.1512)
<i>Tariff</i>	-8.2302** (-2.8649)	-2.3889** (-0.8315)	-11.3663** (-3.9155)
<i>RTA (Cumulative)</i>	2.2103*** (0.1652)	2.2064*** (0.165)	1.5276*** (0.1475)
<i>WTO Membership</i>	-5.0013	2.2179	-1.8885
<i>MATR</i>	-0.223*** (-0.0305)	1.1613*** (0.1587)	0.9803*** (0.1278)
<i>Migrant Population</i>		0.8135*** (0.05941)	1.3408*** (0.0781)
<i>GDP</i>	-4.2825*** (-7.4145)	-9.1476*** ( -1.5837)	-1.312*** (-8.7081)
<i>R-squared</i>	0.83306	0.90435	0.884713

Note: \* $P < 0.05$  ; \*\* $p < 0.01$  ; \*\*\* $p < 0.001$

	Dependent Variable: RTA (Cumulative)		
	Model 1	Model 2	Model 3
<i>UNGA</i>	30.1299 (100.831)	31.759 (106.2828)	10.8631 (35.7006)
<i>Trade Flow</i>	0.0772*** (0.0007)	0.09138*** (0.0009)	0.0342*** (0.0004)
<i>FDI</i>	2.1859*** (1.163)	1.9542*** (-1.0397)	1.6972*** (4.9898)
<i>Portfolio Flows</i>	2.8364*** (1.2786)	-4.4871*** (-2.0227)	4.0224*** (7.8749)
<i>Tariff</i>	0.0848** (0.0295)	0.09** (0.0314)	-0.6492** (-0.2387)
<i>WTO Membership</i>	-1.8627	-1.6732	8.3626
<i>MATR</i>	0.0687*** (0.0094)	0.1555*** (0.0213)	0.1302*** (0.0188)
<i>Migrant Population</i>		0.099*** (0.0072)	0.1178*** (0.0074)
<i>GDP</i>	7.0835*** (1.2264)	1.9029*** (3.2945)	5.0791*** (3.5851)
<i>R-squared</i>	0.66128	0.76982	0.81825

Note: \* $P < 0.05$  ; \*\* $p < 0.01$  ; \*\*\* $p < 0.001$

	Dependent Variable: UNGA		
	Model 1	Model 2	Model 3
<i>Trade Flow</i>	-0.0016*** (-1.6645)	-0.0015*** (-1.5026)	-0.0016*** (-1.7085)
<i>FDI</i>	1.6867*** (8.9737)	1.1894*** (6.3279)	4.222*** (1.2413)
<i>Portfolio Flows</i>	-9.1685*** (-4.133)	-2.798*** (-1.2613)	-1.7164*** (-3.3604)
<i>Tariff</i>	-0.0205** (-0.0079)	-0.0232** (-0.008)	-0.0375** (-0.0138)
<i>RTA (Cumulative)</i>	0.0077*** (0.0006)	0.0099*** (0.0007)	0.0048*** (0.0004)
<i>WTO Membership</i>		4.8152	7.1561
<i>MATR</i>	-0.0068*** (-0.0009)	-0.0092*** (-0.0013)	-0.0046*** (-0.0007)
<i>Migrant Population</i>		-0.0054*** (-0.0004)	0.0025*** (0.0002)
<i>GDP</i>	4.9717*** (8.6077)	2.5766*** (4.461)	-2.3263*** (-1.6421)
<i>R-squared</i>	0.8273	0.8556	0.88835

Note: \* $P < 0.05$  ; \*\* $p < 0.01$  ; \*\*\* $p < 0.001$

	Dependent Variable: Military Spending		
	Model 1	Model 2	Model 3
<i>Trade Flow</i>	7.9021*** (7.7502)	3.6064*** (3.537)	2.8212*** (2.9942)
<i>FDI</i>	-9.8611*** (-5.2463)	-2.4694*** (-1.3138)	2.5599*** (7.5265)
<i>Portfolio Flows</i>	-3.1013*** (-1.398)	-4.8727*** (-2.1966)	-5.4849*** (-1.0738)
<i>Tariff</i>	-0.0003** (-9.3162)	0.0002** ( 5.4961)	0.0006** (0.0002)
<i>RTA (Cumulative)</i>	-0.0003*** (-2.299)	-0.0003*** (-1.9575)	-0.0001*** (-1.2539)
<i>WTO Membership</i>	1.442	-7.752	-2.782
<i>MATR</i>	-9.9337*** (-1.3581)	0.0001*** (1.9021)	0.0001*** (2.0971)
<i>Migrant Population</i>		0.0004*** (3.1102)	0.0004*** (2.4268)
<i>GDP</i>	-1.5612*** (-2.7029)	-1.3243*** (-2.2929)	-6.2447*** (-4.4078)
<i>R-squared</i>	0.78528	0.86361	0.87424

Note: \* $P < 0.05$  ; \*\* $p < 0.01$  ; \*\*\* $p < 0.001$



$$\begin{aligned} TradeFlow = & \beta_0 + \beta_1 UNGA + \beta_2 FDI + \beta_3 PortfolioFlows + \beta_4 Tariff + \beta_5 RTA + \beta_6 WTO + \beta_7 MATR + \beta_8 OPT + \beta_9 TPT \\ & + \beta_{10} FT + \beta_{11} CU + \beta_{12} EU + \beta_{13} MilitarySpending + \beta_{14} MigrantPopulation + \beta_{15} HealthExpenditure + \\ & \beta_{16} GDP + \beta_{17} GDPGrowth + \beta_{18} PopulationGrowth + \beta_{19} RealInterestRate + \beta_{20} DepositRate + \\ & \beta_{21} ExchangeRate + \beta_{22} Inflation + \beta_{23} PoliticalStability + \beta_{24} (Time Dummy 2008-2010) + \beta_{25} (Time Dummy \\ & 2010-2015) + \beta_{26} (Time Dummy 2019-2020) + \varepsilon \end{aligned}$$

$$\begin{aligned} RTA = & \beta_0 + \beta_1 UNGA + \beta_2 FDI + \beta_3 PortfolioFlows + \beta_4 Tariff + \beta_5 TradeFlow + \beta_6 WTO + \beta_7 MATR + \beta_8 OPT + \beta_9 TPT \\ & + \beta_{10} FT + \beta_{11} CU + \beta_{12} EU + \beta_{13} MilitarySpending + \beta_{14} MigrantPopulation + \beta_{15} HealthExpenditure + \\ & \beta_{16} GDP + \beta_{17} GDPGrowth + \beta_{18} PopulationGrowth + \beta_{19} RealInterestRate + \beta_{20} DepositRate + \\ & \beta_{21} ExchangeRate + \beta_{22} Inflation + \beta_{23} PoliticalStability + \beta_{24} (Time Dummy 2008-2010) + \beta_{25} (Time Dummy \\ & 2010-2015) + \beta_{26} (Time Dummy 2019-2020) + \varepsilon \end{aligned}$$

$$\begin{aligned} UNGA = & \beta_0 + \beta_1 TradeFlow + \beta_2 FDI + \beta_3 PortfolioFlows + \beta_4 Tariff + \beta_5 RTA + \beta_6 WTO + \beta_7 MATR + \beta_8 OPT + \beta_9 TPT \\ & + \beta_{10} FT + \beta_{11} CU + \beta_{12} EU + \beta_{13} MilitarySpending + \beta_{14} MigrantPopulation + \beta_{15} HealthExpenditure + \\ & \beta_{16} GDP + \beta_{17} GDPGrowth + \beta_{18} PopulationGrowth + \beta_{19} RealInterestRate + \beta_{20} DepositRate + \\ & \beta_{21} ExchangeRate + \beta_{22} Inflation + \beta_{23} PoliticalStability + \beta_{24} (Time Dummy 2008-2010) + \beta_{25} (Time Dummy \\ & 2010-2015) + \beta_{26} (Time Dummy 2019-2020) + \varepsilon \end{aligned}$$

$$\begin{aligned} MilitarySpending = & \beta_0 + \beta_1 UNGA + \beta_2 FDI + \beta_3 PortfolioFlows + \beta_4 Tariff + \beta_5 RTA + \beta_6 WTO + \beta_7 MATR + \beta_8 OPT + \\ & \beta_9 TPT + \beta_{10} FT + \beta_{11} CU + \beta_{12} EU + \beta_{13} TradeFlow + \beta_{14} MigrantPopulation + \beta_{15} HealthExpenditure + \\ & \beta_{16} GDP + \beta_{17} GDPGrowth + \beta_{18} PopulationGrowth + \beta_{19} RealInterestRate + \beta_{20} DepositRate + \\ & \beta_{21} ExchangeRate + \beta_{22} Inflation + \beta_{23} PoliticalStability + \beta_{24} (Time Dummy 2008-2010) + \beta_{25} (Time Dummy \\ & 2010-2015) + \beta_{26} (Time Dummy 2019-2020) + \varepsilon \end{aligned}$$

### **Model 1:**

Years: 2000 – 2020

Dropping independent variables:

- Military Spending/GDP
- Migrant Population/Total Population
- Health Expenditure (is it to GDP?)
- One-Way Preferential Trade
- Two-Way Preferential Trade
- Free Trade Agreement
- Customs Union
- Economic Union

**Model 2:**

Years: 2000 – 2020

Dropping independent variables:

- One-Way Preferential Trade
- Two-Way Preferential Trade
- Free Trade Agreement
- Customs Union
- Economic Union

**Model 3:**

Years: 2000 – 2017

Dropping no independent variables

**DATA SOURCES**

- **Trade Flow/GDP:** World Bank
- **FDI (net):** World Bank
- **Portfolio (net):** World Bank
- **GDP:** World Bank
- **GDP Growth:** World Bank
- **Population Growth:** World Bank
- **Exchange Rate:** World Bank
- **Inflation:** World Bank
- **Political Stability & Absence of Violence:** World Bank
- **Applied Tariff Indicator:** World Development Indicators
- **OPT:** Kellogg
- **TPT:** Kellogg
- **FT:** Kellogg
- **CU:** Kellogg
- **EU:** Kellogg
- **WTO:** Google Search for each country's WTO membership status
- **Military Spending (% of GDP):** <https://www.sipri.org/databases/milex>
- **Health Expenditure:** <https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS>
- **Migration Population/Total Population:** [https://www.oecd-ilibrary.org/social-issues-migration-health/data/oecd-international-migration-statistics/international-migration-database\\_data-00342-en](https://www.oecd-ilibrary.org/social-issues-migration-health/data/oecd-international-migration-statistics/international-migration-database_data-00342-en)
- **MATR:** IMF AREAER database
- **UNGA:** <https://dataviz.yiqinfu.com/unview/>
- **RTA (cumulative):** <https://rtais.wto.org/UI/PublicMaintainRTAHome.aspx>

For the purpose of IR theories explanatory power in the model we added certain variables:

- Military Spending (% of GDP)
- Migration Population/Total Population
- Political Stability & Absence of Violence

Macroeconomic indicators chosen by Jeffrey Sachs paper to explain the model better:

- GDP
- GDP Growth
- Population Growth
- Exchange Rate
- Inflation

We can't fully clarify the fluctuations in RTA, UNGA, trade flow, and military spending solely through a handful of indicators like agreements and financial flows. There are additional economic and political factors at play that influence these dependent variables. Therefore, in our pursuit of a more comprehensive model with greater explanatory power, we incorporated specific macroeconomic indicators as identified in the Jeffrey Sachs paper. This endeavor aimed to boost our model's robustness and elevate its R-squared value.

Source:

NBER working Paper Series

LDC Borrowing with Default Risk

Working Paper No. 925

National Bureau of Economic Research

Authors: Jeffrey Sachs, Daniel Cohn

July 1982

Note: Time dummies was added to measure the effects/changes of the three crises on the dependent variables.