On the Effectiveness of Fiscal Devaluations: Evidence Using Bilateral Trade Balance Data

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Introduction

Divergence in external competitiveness and large trade imbalances within the European Union (especially euro area) during pre-crisis period.

The financial and economic crisis in the EU → need to correct the imbalances.

No possibility of nominal exchange rate adjustment in the euro area countries (and other countries with fixed ER regimes).

Adjustment of nominal wages and prices takes time:

→ employment cuts often easier than full wage adjustment

→ increasing unemployment and adjustment through declines in imports much before a real depreciation of the exchange rate.

Fiscal devaluation (FD) – budget-neutral shift from employers' social security contributions (SCR) to the value added tax (VAT) – expected to speed up the adjustment process.

Motivation

- FD is a highly relevant topic, both in policy and in academic circles.
- Very scarce empirical research on the effects of FD on trade balances.
- Results of the empirical research are not entirely robust, as emphasized by other authors themselves, i.e. cannot be assessed as reliable.
- Large differences in the magnitude of the FD effects on trade balances in empirical research and simulation studies.
- Virtually no empirical research on the specific channels of the above impact, nor on the factors influencing the magnitude of the effects.
- What is the magnitude of the effect of FD on trade balance, once econometric issues are resolved and policy coincidence is accounted for (using bilateral trade balance data)?

How does FD work?

The **main form of FD** consists of cutting the employers' social security contributions (SCR) and raising the value added tax (VAT), with a neutral (ex ante) impact on government balance.

SCR cuts → lower labor costs and initially unchanged gross wages → lower prices of domestic producers; shift of demand to home country goods (in domestic and export markets).

VAT hike → higher consumer prices at home → lower consumption and imports.

In the **long run**: upward pressure on wages due to 1) higher labor demand at lower labor costs; 2) union demands after increase in consumer prices

→ The positive impact of lower labor costs declines, while domestic demand increases

→ The positive effect on trade balance gradually vanishes.

Frequency of FD

Frequency of coordinated tax changes, in % of sample observations

Changes in single country tax rates			
Absolute value of tax rate changes:	≥ 1 p.p.	≥ 0.5 p.p.	≥ 0.3 p.p.
VAT hike	9.9	12.3	12.9
VAT cut	2.0	3.0	3.0
SCR hike	1.7	3.6	5.3
SCR cut	4.0	8.9	11.9
Fiscal devaluation	0.0	1.0	2.0
Fiscal revaluation	0.0	0.0	0.0
Changes in country differentials of tax rates			
Absolute value of tax rate changes:	≥ 1 p.p.	≥ 0.5 p.p.	≥ 0.3 p.p.
VAT hike	9.6	12.2	12.8
VAT cut	8.5	12.4	13.7
SCR hike	4.9	10.7	17.5
SCR cut	4.5	12.1	16.3
Fiscal devaluation	1.1	2.0	2.8
Fiscal revaluation	0.9	1.4	4.7

Related research

Theoretical reference: **Farhi et al. (2014)** – characterize conditions under which equivalent real allocation is achieved through FD and nominal exchange rate devaluation.

Many **simulation studies**: tax shift in amount of 1% of GDP results in trade balance improvements ranging between 0.1 and 0.6% of GDP.

Empirical research is very scarce. Possibly the most relevant empirical contribution (devotes more attention to econometric issues):

De Mooij and Keen (2013) – positive short-run impact of FD (of 1% of GDP in size) on trade balance in amount between 2.8 and 4% of GDP. Still, **remaining econometric problems (which we try to resolve)**:

1) endogeneity may not be completely resolved;
2) policy coordination not addressed.

Empirical approach

We apply the empirical model of De Mooij and Keen (2013) to 27 EU countries (Portugal excluded due to lack of data) over the period 2000-2014 (unbalanced panel).

$$\Delta TB_{i,t} = \lambda TB_{i,t-1} + \beta_{D,VAT}\Delta VAT_{i,t} + \beta_{L,VAT}VAT_{i,t-1} + \beta_{D,SCR}\Delta SCR_{i,t} + \beta_{L,SCR}SCR_{i,t-1} + \beta_{DX}^{'}\Delta X_{i,t} + \beta_{LX}^{'}X_{i,t-1} + \alpha_i + \gamma_t + u_{i,t}$$

$$FD_{SR} = \beta_{D,VAT} - \beta_{D,SCR}$$

$$FD_{LR} = -\left(\frac{\beta_{L,VAT} - \beta_{L,SCR}}{\lambda}\right)$$

However, instead of aggregate trade balance data, we use bilateral trade balance data for each country and 5 largest EU trade partners, all variables defined as country-differentials

→ accounting for policy coincidence and obtaining more observations

$$\Delta TB_{ij,t} = \lambda TB_{ij,t-1} + \beta_{D,VAT}\Delta VAT_{ij,t} + \beta_{L,VAT}VAT_{ij,t-1} + \beta_{D,SCR}\Delta SCR_{ij,t} + \beta_{L,SCR}SCR_{ij,t-1} + \beta'_{DX}\Delta X_{ij,t} + \beta'_{LX}X_{ij,t-1} + \alpha_{ij} + \gamma_t + u_{ij,t}.$$

Empirical approach

Additionally, we pursue an approach in which we include all the tax and other explanatory variables for both countries in each pair of countries separately.

$$\Delta TB_{ij,t} = \lambda TB_{ij,t-1} + \beta_{Di,VAT}\Delta VAT_{i,t} + \beta_{Li,VAT}VAT_{i,t-1} + \beta_{Di,SCR}\Delta SCR_{i,t} + \beta_{Li,SCR}SCR_{i,t-1} + \beta'_{DiX}\Delta X_{i,t} + \beta'_{LiX}X_{i,t-1} + \beta_{Dj,VAT}\Delta VAT_{i,t} + \beta_{Lj,VAT}VAT_{i,t-1} + \beta_{Dj,SCR}\Delta SCR_{i,t} + \beta_{Lj,SCR}SCR_{i,t-1} + \beta'_{DjX}\Delta X_{i,t} + \beta'_{LjX}X_{i,t-1} + \alpha_{ij} + \gamma_t + u_{ij,t}$$

Partial short-run effects of a fiscal devaluation in countries *i* and *j*

$$FD_{SR,i} = \beta_{Di,VAT} - \beta_{Di,SCR}$$
$$FD_{SR,j} = \beta_{Dj,VAT} - \beta_{Dj,SCR}$$

Average short-run effect of a fiscal devaluation (from the home country's perspective)

$$FD_{SR,ij} = \left[\left(\beta_{Di,VAT} - \beta_{Di,SCR}\right) - \left(\beta_{Dj,VAT} - \beta_{Dj,SCR}\right)\right]/2$$

Partial long-run effects of a fiscal devaluation in countries *i* and *j*

$$FD_{LR,i} = -(\beta_{Li,VAT} - \beta_{Li,SCR})/\lambda$$
$$FD_{LR,j} = -(\beta_{Lj,VAT} - \beta_{Lj,SCR})/\lambda$$

Average long-run effect of a fiscal devaluation (from the home country's perspective)

$$FD_{LR,ij} = \left[-(\beta_{Li,VAT} - \beta_{Li,SCR})/\lambda + (\beta_{Lj,VAT} - \beta_{Lj,SCR})/\lambda\right]/2$$

Empirical approach

We apply the empirical **model of De Mooij and Keen (2013)** to 27 EU countries over the period 2000-2014 (unbalanced panel).

140 country pairs with 25 country duplicates dropped from the sample

Bilateral trade balance data for each country and its 5 largest EU trade partners, all **variables defined as country-differentials** → accounting for policy coincidence and obtaining more observations.

Tax variables: cyclically adjusted revenue shares in GDP – reduces potential endogeneity and accounts for differences and changes in tax base.

Other variables: real GDP growth; general government balance; other government revenues; dependency ratio; unemployment; (no RER!).

Excluded instruments for tax variables: tax rates; public debt; EU and EMU → valid instruments, correctly excluded, no weak identification.

Empirical approach

Estimation method:

2-stage least squares (2SLS) instrumental variable estimation with individual fixed effects

Robustness checks:

model specification (with or without time effects, joint or separate variables for country pairs, adding NER as a covariate)

sample heterogeneity (excluding the biggest 4 trading partners – GE, IT, FR, UK)

influential observations (dummies for potentialy influential observations)

estimation method (system GMM)

other type of FD (personal income tax (PIT) cut & VAT hike)

Empirical approach

Statistical tests:

checking for underidentification of endogenous variables

The Kleibergen-Paap rk LM statistic tests thenull hypothesis that endogenous variables are underidentified can be rejected at the 1% significance level

validity of instruments

The Hansen J statistic tests the joint null hypothesis that the instruments are uncorrelated with the error term and that the excluded instruments are correctly excluded from the estimated equation

correct exclusion of excluded instruments

F test of excluded instruments and Chi-square test for underidentification

weak identification

Sanderson and Windmeijer (2016) multivariate F test for weak identification

Variables and data sources

Bilateral goods trade balance (**TB**): exports minus imports of goods in trade between a home and foreign (trade partner) country, from the home country's perspective (the home country is the reporting country), in % of home country's GDP; source: WITS (COMTRADE) database.

Value added tax revenues (**VAT**): cyclically adjusted revenues from VAT, in % of GDP. Actual revenues from Eurostat: General government, Value added type taxes (D.2111).

Value added tax rate (**VAT rate**): standard statutory VAT rate, in %, source: European Commission, Tax and Customs Union. When VAT has been changed within a year, the rate is calculated as the weighted average where the weights correspond to time periods during which each rate has been applied in that year.

Employers' social security contributions (**SCR**): cyclically adjusted revenues from SCR, in % of GDP. Actual revenues from Eurostat: General government, Compulsory employers' actual social contributions (D.611C).

Employers' social security rate (wedge) (**SCR rate**): average rate of SCR for a single person at the average level of earnings, in % of total labor costs; sources: European Commission, Tax and Benefits Database, and OECD.

Variables and data sources

Nominal GDP (**GDP**): Gross domestic product at market prices (current prices); source: Eurostat.

GDP growth (**GDPG**): Chain-linked volumes, GDP change from the previous period, in %; source: Eurostat.

General government balance (**GGB**): general government balance, in % of GDP; source: Eurostat: General government, net lending (+)/net borrowing (-).

Government revenues from sources other than VAT and SCR (**GREV**): Total general government revenue minus actual VAT and SCR revenues, in % of GDP; source: Eurostat.

Dependency ratio (**DEP**): share of population aged 65 and above in population aged 15–64, in %; source: Eurostat: Population on 1 January by broad age group and sex.

Unemployment rate (**UR**): registered unemployment rate, in %; source: IMF International Financial Statistics.

Public debt (**PDEBT**): General government debt, in % of GDP; source: Eurostat: General government, Government consolidated gross debt.

Benchmark model: De Mooij and Keen (2013)

Dependent variable: $\Delta TB_{ij,t}$	(1) Without time effects		(2) With time effects	
$TB_{ij,t-1}$	-0.35***	(0.07)	-0.35***	(0.07)
$\Delta VAT_{ij,t}$	0.14	(0.10)	0.10	(0.10)
$VAT_{ij,t-1}$	-0.16	(0.10)	-0.13	(0.10)
$\Delta SCR_{ij,t}$	-0.29*	(0.16)	-0.30*	(0.17)
$SCR_{ij,t-1}$	-0.13*	(0.07)	-0.14*	(0.07)
$\Delta GDPG_{ij,t}$	-0.01	(0.02)	-0.01	(0.02)
$GDPG_{ij,t-1}$	-0.01	(0.02)	-0.01	(0.02)
$\Delta GGB_{ij,t}$	0.00	(0.01)	0.00	(0.01)
$GGB_{ij,t-1}$	0.01	(0.01)	0.01	(0.01)
$\Delta GREV_{ij,t}$	0.00	(0.02)	-0.01	(0.02)
$GREV_{ij,t-1}$	0.01	(0.02)	0.01	(0.02)
$\Delta DEP_{ij,t}$	0.05	(0.07)	0.06	(0.07)
$DEP_{ij,t-1}$	0.01	(0.02)	0.01	(0.02)
$\Delta UR_{ij,t}$	0.05**	(0.02)	0.05**	(0.02)
$UR_{ij,t-1}$	0.02	(0.01)	0.01	(0.01)
Observations	1250		1250	
FD_{SR}	**0.44****		**0.40****	
FD_{LR}	**-0.08**		**0.03**	

Benchmark model: separate explanatory variables for each country

Dependent variable: $\Delta TB_{ij,t}$	(1) Without time effects		(2) With time effects	
$TB_{ij,t-1}$	-0.35***	(0.07)	-0.37***	(0.07)
$\Delta VAT_{i,t}$	0.04	(0.17)	0.14	(0.15)
$VAT_{i,t-1}$	-0.21*	(0.13)	-0.17	(0.13)
$\Delta SCR_{i,t}$	-0.42**	(0.19)	-0.29	(0.18)
$SCR_{i,t-1}$	-0.15*	(0.08)	-0.14*	(0.08)
$\Delta GDPG_{i,t}$	-0.03	(0.02)	-0.01	(0.02)
$GDPG_{i,t-1}$	-0.04*	(0.02)	-0.02	(0.02)
$\Delta GGB_{i,t}$	0.01	(0.01)	0.01	(0.01)
$GGB_{i,t-1}$	0.02	(0.01)	0.02	(0.01)
$\Delta GREV_{i,t}$	-0.02	(0.03)	-0.03	(0.02)
$GREV_{i,t-1}$	0.00	(0.02)	0.00	(0.02)
$\Delta DEP_{i,t}$	0.02	(0.10)	-0.11	(0.10)
$DEP_{i,t-1}$	0.04	(0.03)	-0.01	(0.03)
$\Delta UR_{i,t}$	0.03	(0.02)	0.03	(0.02)
$UR_{i,t-1}$	0.02	(0.01)	0.01	(0.01)
$\Delta VAT_{j,t}$	-0.08	(0.12)	-0.05	(0.12)
$VAT_{j,t-1}$	0.24**	(0.11)	0.14	(0.12)
ΔSCR_{t}	0.29	(0.28)	0.48	(0.32)
$SCR_{j,t-1}$	-0.20	(0.27)	0.11	(0.23)

Benchmark model: separate explanatory variables for each country

Dependent variable: $\Delta TB_{ij,t}$	(1) Without time effects		(2) With time effects	
$\Delta GDPG_{j,t}$	-0.01	(0.02)	0.01	(0.04)
$GDPG_{j,t-1}$	-0.02	(0.03)	0.01	(0.03)
$\Delta GGB_{j,t}$	0.01	(0.02)	0.01	(0.02)
$GGB_{j,t-1}$	-0.01	(0.02)	0.00	(0.02)
$\Delta GREV_{j,t}$	-0.01	(0.03)	-0.02	(0.04)
$GREV_{j,t-1}$	0.05	(0.04)	-0.03	(0.04)
$\Delta DEP_{j,t}$	-0.05	(0.09)	-0.21*	(0.11)
$DEP_{j,t-1}$	-0.04	(0.03)	-0.07**	(0.03)
$\Delta UR_{j,t}$	-0.04	(0.05)	-0.09**	(0.05)
$UR_{j,t-1}$	0.00	(0.03)	-0.01	(0.02)
Observations	1250		1250	
Instruments	37		50	
K-P rk LM statistic	48.82***		39.45***	
Hansen J	4.77		9.94	
$FD_{SR,i}$	**0.46***		**0.42***	
$FD_{LR,i}$	**-0.18**		**-0.10**	
$FD_{SR,j}$	**-0.37**		**-0.53**	
$FD_{LR,j}$	**1.26**		**0.09**	
$FD_{SR,ij}$	**0.41***		**0.48****	
$FD_{LR,ij}$	**-0.72**		**-0.09**	
Endogeneity test: all variables	15.56**		11.87	
Endogeneity test: VAT	10.41**		9.28*	
Endogeneity test: SCR	10.46**		5.84	

Robustness checks: sample heterogeneity testing

Dependent variable: $\Delta TB_{ij,t}$	Sample without: Germany	France	Italy	UK	Outlier pairs	Outlier dummy
$TB_{ij,t-1}$	-0.40***	-0.36***	-0.31***	-0.36***	-0.30***	-0.33***
$\Delta VAT_{ij,t}$	0.16	0.10	0.01	0.28	0.16**	0.17**
$VAT_{ij,t-1}$	0.02	-0.10	-0.16*	-0.09	-0.06	-0.10
$\Delta SCR_{ij,t}$	-0.35*	-0.33*	-0.30	-0.30	-0.23	-0.29**
$SCR_{ij,t-1}$	-0.24***	-0.14*	-0.12	-0.12	-0.14**	-0.17***
$\Delta GDPG_{ij,t}$	0.00	-0.02	-0.02	0.00	0.00	0.00
$GDPG_{ij,t-1}$	0.01	-0.02	-0.04**	0.00	0.01	-0.01
$\Delta GGB_{ij,t}$	0.00	0.00	0.01	0.00	0.00	-0.00
$GGB_{ij,t-1}$	-0.01	0.01	0.01	0.00	0.00	0.00
$\Delta GREV_{ij,t}$	-0.01	-0.01	-0.03	-0.01	-0.03*	-0.02
$GREV_{ij,t-1}$	0.02	0.01	0.01	0.02	0.03*	0.02
$\Delta DEP_{ij,t}$	-0.13	0.07	0.10*	0.04	0.10**	0.07
$DEP_{ij,t-1}$	0.03	0.00	0.01	0.00	0.00	-0.01
$\Delta UR_{ij,t}$	0.07***	0.06**	0.04*	0.07***	0.04**	0.03**
$UR_{ij,t-1}$	0.01	0.02	0.00	0.01	0.00	0.00
Outlier dummy	-	-	-	-	-	3.29***
Observations	944	1018	1045	1043	1158	1250
FD_{SR}	**0.51*** **	**0.43** **	**0.31**	**0.59** **	**0.39*** **	**0.47*** **
FD_{LR}	**0.64***	**0.11**	**-0.11**	**0.09**	**0.27**	**0.23**

Benchmark model with NER

Dependent variable: $\Delta TB_{ij,t}$	(1) Without time effects		(2) With time effects	
$TB_{ij,t-1}$	-0.36***	(0.07)	-0.36***	(0.07)
$\Delta VAT_{ij,t}$	0.20*	(0.12)	0.15	(0.12)
$VAT_{ij,t-1}$	-0.11	(0.11)	-0.09	(0.12)
$\Delta SCR_{ij,t}$	-0.33*	(0.18)	-0.33*	(0.18)
$SCR_{ij,t-1}$	-0.12*	(0.07)	-0.14*	(0.08)
$\Delta GDPG_{ij,t}$	-0.01	(0.02)	-0.01	(0.02)
$GDPG_{ij,t-1}$	-0.01	(0.02)	-0.01	(0.02)
$\Delta GGB_{ij,t}$	0.00	(0.01)	0.00	(0.01)
$GGB_{ij,t-1}$	0.01	(0.01)	0.01	(0.01)
$\Delta GREV_{ij,t}$	-0.01	(0.02)	-0.01	(0.02)
$GREV_{ij,t-1}$	0.00	(0.02)	0.01	(0.02)
$\Delta DEP_{ij,t}$	0.04	(0.07)	0.05	(0.07)
$DEP_{ij,t-1}$	0.00	(0.03)	0.00	(0.02)
$\Delta UR_{ij,t}$	0.05**	(0.02)	0.06**	(0.02)
$UR_{ij,t-1}$	0.01	(0.01)	0.01	(0.01)
$\Delta NER_{ij,t}$	0.90	(0.71)	0.89	(0.71)
$NER_{ij,t-1}$	-0.33	(0.39)	-0.22	(0.39)
Observations	1250		1250	
FD_{SR}	**0.53****		**0.48****	
FD_{LR}	**0.04**		**0.13**	

Other robustness checks

Defining the model in terms of separate variables for home and foreign country in country-pairs: results confirmed.

Adding nominal exchange rate variable: results confirmed, nominal ER not significant.

Euro area vs. non-euro area countries (as in De Mooij and Keen, 2013): results confirmed, no large differences found.

Using system GMM DPD estimator by Arellano and Bover (1995) and Blundell and Bond (1998): results largely confirmed for variables defined as country-differentials (at 10% level) and separately (at 5% level) in 2 out of 3 specifications (depending on the number of lags of used instruments).

System GMM with instruments specification as in De Mooij and Keen (2013): results confirmed in 2 out of 3 approaches (at 10% level), depending on the number of lags of used instruments.

FD impact on overall trade balance (back-of-the-envelope calculations)

Average size of bilateral trade flows in our study (imports plus exports over GDP) 8.04%, while the average size of overall international trade flows 85.94% of GDP (multiplying the bilateral trade impact by 10.68)

FD impact of 4.3% of GDP on the overall trade balance of an EU country

FD impact of 4.4% of GDP on the overall trade balance for the euro area and 3.4% of GDP for non-euro area countries

De Mooij and Keen (2013) found 4% of GDP impact of FD on trade balance for the euro area and 2.8% for non-euro area countries

Extrapolation to countries and country-groups studied in simulations:

2.1% trade balance improvement for Spain (0.6% in Gomes et al. 2016);

0.75% improvement for „euro area south" in trade with the rest of the euro area (0.3%, i.e. in the range from 0.1 to 0.6% in Engler et al. 2017).

Conclusions

A tax shift from SCR to VAT in the amount of 1% of GDP leads to a **short-run bilateral trade balance improvements amounting to 0.4% of GDP** (baseline).

We **do not detect any** significant **long-run effects**.

Extrapolation using trade openness: the **effect on the overall trade balance** is **4.3% of GDP for the whole sample** (4.4% for the euro area countries, 3.4% for the non-euro area).

Extrapolation to countries and country-groups studied in simulations:

- 2.1% trade balance improvement for Spain (0.6% in Gomes et al. 2016);
- 0.75% improvement for „euro area south" in trade with the rest of the euro area (0.3%, i.e. in the range from 0.1 to 0.6% in Engler et al. 2017).

External adjustments in the crisis could have mostly been the result of import compression (demand decline due to increasing unemployment).

→ **FD can be a useful short-run tool in speeding up external adjustments.**

Different forms and effects of FD

Alternatively:

Cuts in personal income tax (PIT) or employees' social security contributions (SCE) financed through VAT hike – different expected effects.

PIT and SCE cuts do not initially reduce labor costs, but increase net wages for given labor costs → possibility for wage renegotiation, or new employment at lower labor costs (but same, or higher net wages).

Thus, smaller relative price and demand effects → smaller impact on trade balance expected.

Also, SCE are usually associated with personal rights (e.g. unemployment benefits or pensions) → possibly different reactions of economic agents to changes in SCE and PIT.

Other forms of FD

Dependent variable: $\Delta TB_{ij,t}$	PIT		SCE	
$TB_{ij,t-1}$	-0.36***	(0.07)	-0.38***	(0.08)
$\Delta GDPG_{ij,t}$	-0.01	(0.02)	0.00	(0.02)
$GDPG_{ij,t-1}$	-0.01	(0.02)	0.00	(0.02)
$\Delta GGB_{ij,t}$	0.01	(0.01)	0.01	(0.01)
$GGB_{ij,t-1}$	0.01	(0.01)	0.02*	(0.01)
$\Delta GREV_{ij,t}$	-0.02	(0.02)	-0.03	(0.02)
$GREV_{ij,t-1}$	0.01	(0.02)	-0.01	(0.02)
$\Delta DEP_{ij,t}$	0.05	(0.07)	0.06	(0.07)
$DEP_{ij,t-1}$	0.01	(0.02)	0.00	(0.02)
$\Delta UR_{ij,t}$	0.04**	(0.02)	0.05**	(0.02)
$UR_{ij,t-1}$	0.00	(0.01)	0.01	(0.01)
$\Delta VAT_{ij,t}$	0.09	(0.10)	0.08	(0.12)
$VAT_{ij,t-1}$	-0.13	(0.10)	-0.18	(0.11)
$\Delta PIT_{ij,t}$	-0.13	(0.09)	-	
$PIT_{ij,t-1}$	0.05	(0.04)	-	
$\Delta SCE_{ij,t}$	-		0.04	(0.13)
$SCE_{ij,t-1}$	-		0.10	(0.14)
Observations	1288		1149	
FD_{SR}	**0.22***		**0.04**	
FD_{LR}	**-0.50****		**-0.75**	

Other FIDE research papers

What is the magnitude of the effect of FD on trade balance, once econometric issues are resolved and policy coincidence is accounted for (using bilateral trade balance data)?

Paper published in Review of World Economics

Does the effect from taxes to trade balance run (at least partly) via real exchange rates, based on the ULC and CPI?

Paper published in Review of International Economics

Does the magnitude of the effect depends on the composition of international trade flows?

Paper published in The World Economics

If FD reduces real labor costs, does this effect varies across countries with different wage bargaining systems?

Paper under review

How does corporate income taxation (CIT) affect external balances – balance of trade in goods and services and the current account balance in the short and in the long run?

Paper under review