
On a Fiscal Capacity for the Eurozone

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The Purpose of a Fiscal Capacity

- “In all federations the different combinations of federal budgetary mechanisms have powerful “shock-absorber” effects dampening the amplitude either of economic difficulties or of surges in prosperity of individual states. This is both the product of and the source of the sense of national solidarity which all relevant economic and monetary unions share.” Jacques Delors (1989, p. 89)
- A fiscal capacity is expected to...
 - provide insurance against asymmetric shocks,
 - by providing only temporary,
 - but timely transfers in times of crises,
 - while precluding cumulative net transfers,
 - without explicitly asking for repayment,
 - assuming a random distribution of shocks.

- Asymmetric shocks not observable
- Accession to EMU itself might be considered as asymmetric shock
- Transfer payments usually linked to observable macroeconomic figures like unemployment
 - May give rise to adverse political-economic incentives
 - Manipulation and anticipation may lead to permanent net transfers
- (Ex ante) Conditionality may prevent net transfers
- Potential trade-off with timely transfers in times of crises

Existing Proposals for a Fiscal Capacity

- Dolls et al. (2016): Targeted transfers for short-term unemployment
 - Max of 50% of unemployment benefits and national co-financing
- Bénassy-Quéré et al. (2018): Transfers proportional to deviation in unemployment relative to given threshold
 - Contributions of 0.1% of GDP
 - Transfers earmarked, usage premium & further conditionality
- Arnold et al. (2018): Also linked to deviation in unemployment
 - Threshold computed using 7-year rolling window
 - Fiscal capacity allowed to borrow
- Carnot et al. (2017): Application of a double condition
 - Conditions: 15-year moving average & change in unemployment
 - Both contributions & transfers depend on both conditions
- Beetsma et al. (2018): Approach using trade triggers
 - Motivated by potential adverse incentives

Baseline for Simulations (Weiske and Yeter, 2019)

Arnold et al. (2018) serving as a starting reference

$$\begin{aligned}CB_{j,t} &= 0.3\% \times GDP_{j,t} \\TR_{j,t}^g &= 0.25 \times \max(\hat{u}_{j,t}, 0) \times GDP_{j,t} \\TR_{j,t}^n &= TR_{j,t}^g - CB_{j,t} \\CUM_{j,t} &= \sum_{s=\tau} TR_{j,s}^n\end{aligned}$$

- Common test ground for all considered schemes
- All schemes are filled with average annual contribution equal to 0.3% of GDP
- Average amount of resources distributed across countries is identical in all schemes
- Access to financial markets without borrowing costs

Alternative Schemes (Weiske and Yeter, 2019)

- Usage premium

$$CB_{j,t} = \left[0.25\% + 0.1 \times \max(0, cum_{j,t}) \right] \times GDP_{j,t}$$

- Symmetric cap

$$|cum_{j,t}| = \max(|cum_{j,t}|, 3\%)$$

- Threshold

$$TR_{j,t}^g = 2.5 \times \max(\Delta u_{j,t} - 1\%, 0) \times GDP_{j,t}$$

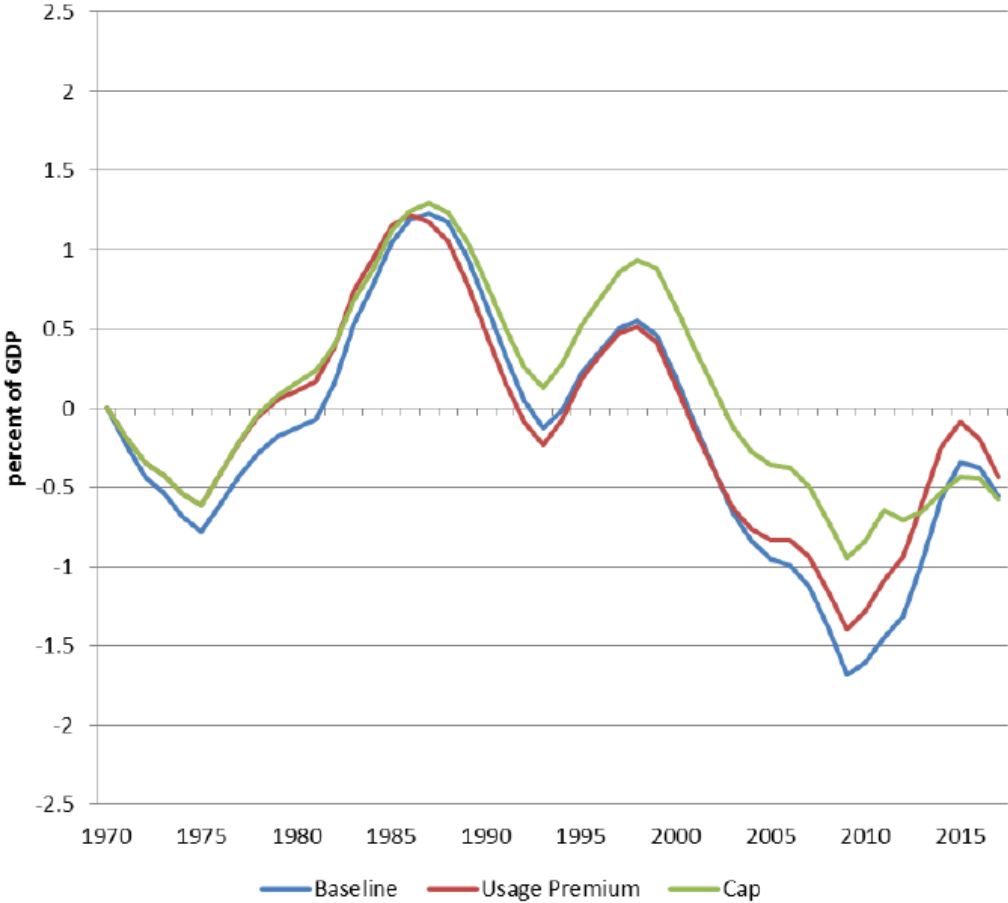
- Double condition

$$TR_{j,t}^g = \begin{cases} 0.75 \times \Delta u_{j,t} \times GDP_{j,t} & \text{if } \hat{u}_{j,t} > 0 \text{ and } \Delta u_{j,t} > 0 \\ 0, & \text{else.} \end{cases}$$
$$CB_{j,t} = \begin{cases} -0.95 \times \Delta u_{j,t} \times GDP_{j,t} & \text{if } \hat{u}_{j,t} < 0 \text{ and } \Delta u_{j,t} < 0 \\ 0, & \text{else.} \end{cases}$$

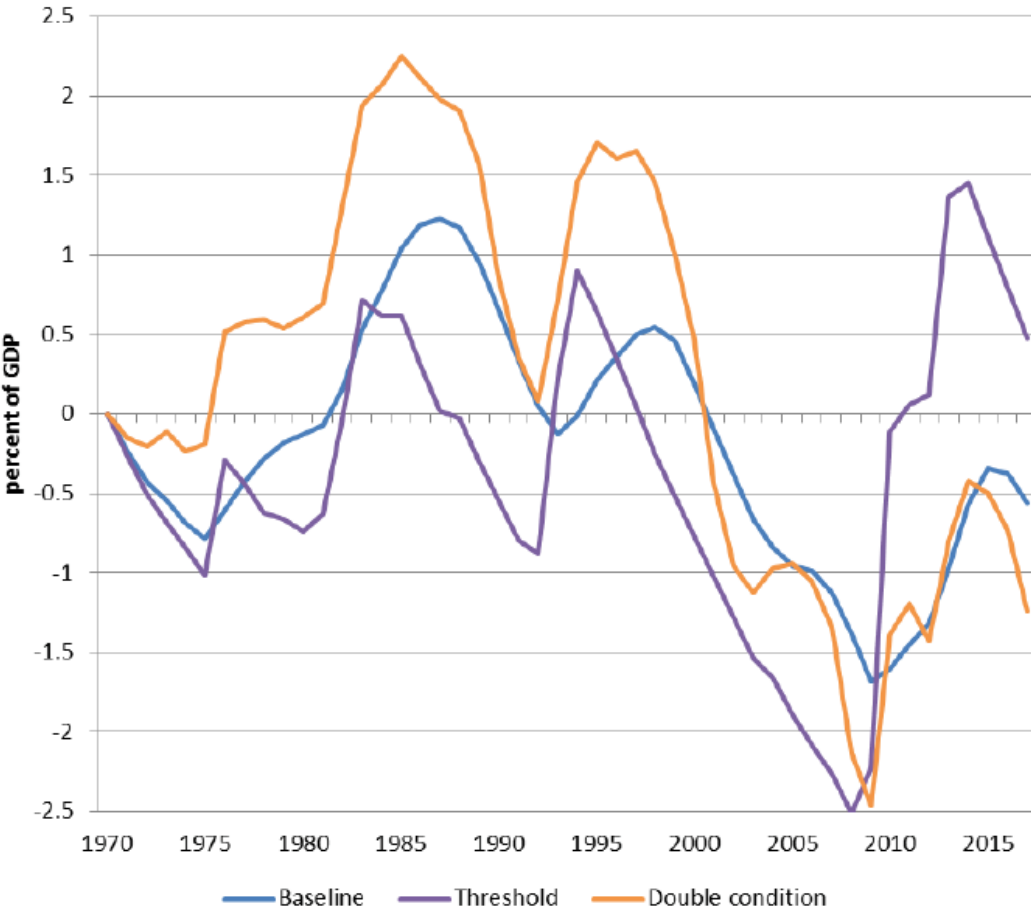
- Data for Euro-12 countries
- Sample: 1970 - 2017
- Data on:
 - Unemployment rate
 - GDP
 - Output gap
 - Fiscal balances

Cumulated Transfers at the Level of the Capacity

Cumulated Net Transfers (1)



Cumulated Net Transfers (2)



Source: Weiske and Yeter (2019)

Cumulated Net Transfers at the Country Level

	DE	FR	IT	ES	NL	BE	EL	PT	AT	SF	IE	LU
Baseline	-2.5	-2.6	-1.2	9.9	-2.4	-3.1	11.8	2.3	-3.9	-1.1	2.0	-1.8
Usage premium	-1.9	-1.8	0.2	5.9	-1.7	-2.6	9.3	1.9	-2.9	-1.5	1.3	-1.0
Cap	-1.3	-1.4	0.2	2.5	-1.4	-2.2	3.0	2.3	-2.8	-1.3	1.2	-1.0
Threshold	-3.7	-5.4	-3.6	28.2	-2.9	-4.5	34.6	2.2	-5.9	5.4	6.5	-4.2
Double condition	-3.4	-1.6	-0.5	3.7	-2.1	-4.2	12.9	0.5	-1.1	-0.6	-3.2	0.7

Cumulative net transfers in percent of GDP (2017).

Source: Weiske and Yeter (2019)

Cumulated Net Transfers at the Country Level

Cumulative net transfers to the twelve euro area member states as part of a fiscal capacity¹

%

		AT	BE	DE	ES	FI	FR	GR	IE	IT	LU	NL	PT
Arnold et al. (2018) ²	1990 – 2017	- 2.8	- 3.1	- 0.7	20.7	3.5	- 1.4	29.0	5.8	3.3	0.1	- 1.1	9.0
Arnold et al. (2018) ²	1970 – 2017	- 2.6	- 0.8	0.7	25.2	3.3	0.7	30.8	7.3	4.2	0.3	0.6	10.0
Beetsma et al. (2018)	1995 – 2014	- 0.1	- 1.2	0.2	0.1	2.3	- 0.3	1.7	- 5.5	1.1	- 10.9	- 0.9	1.6

1 – As a percentage of nominal GDP. Time period under investigation determined by availability of data. AT-Austria, BE-Belgium, DE-Germany, ES-Spain, FI-Finland, FR-France, GR-Greece, IE-Ireland, IT-Italy, LU-Luxembourg, NL-Netherlands, PT-Portugal. 2 – Proposal of the International Monetary Fund. Cumulative payouts at the start of each year. Based on the assumption that the fiscal capacity can borrow and lend money on an interest-free basis..

Sources: European Commission, OECD, own calculations

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Source: GCEE (2018)

Stationarity of Cumulated Net Transfers

		DE	FR	IT	ES	NL	BE	EL	PT	AT	SF	IE	LU
ADF	constant	Red	Red	Green	Green	Red	Red	Red	Red	Red	Red	Green	Green
	constant + trend	Red	Red	Red	Green	Red	Red	Red	Red	Red	Red	Red	Red
PP	constant	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
	constant + trend	Red	Red	Green	Red	Red	Red	Red	Red	Red	Red	Red	Red
KPSS	constant	Red	Green	Green	Green	Green	Green	Red	Green	Red	Green	Green	Green
	constant + trend	Red	Red	Red	Green	Red	Red	Green	Green	Red	Green	Green	Green
LLC	constant	Red											
	constant + trend	Red											
IPS	constant	Yellow											
	constant + trend	Yellow											

Green: stationary. Yellow: some are stationary (IPS). Red: non stationary. 5% confidence level. ADF: Augmented-Dickey-Fuller. PP: Phillips-Perron. KPSS: Kwiatkowski-Phillips-Schmidt-Shin. LLC: Levin-Lin-Chu. IPS: Im-Pesaran-Shin.

Source: Weiske and Yeter (2019)

Persistence of Transfers (Weiske and Yeter 2019)

- Error correction

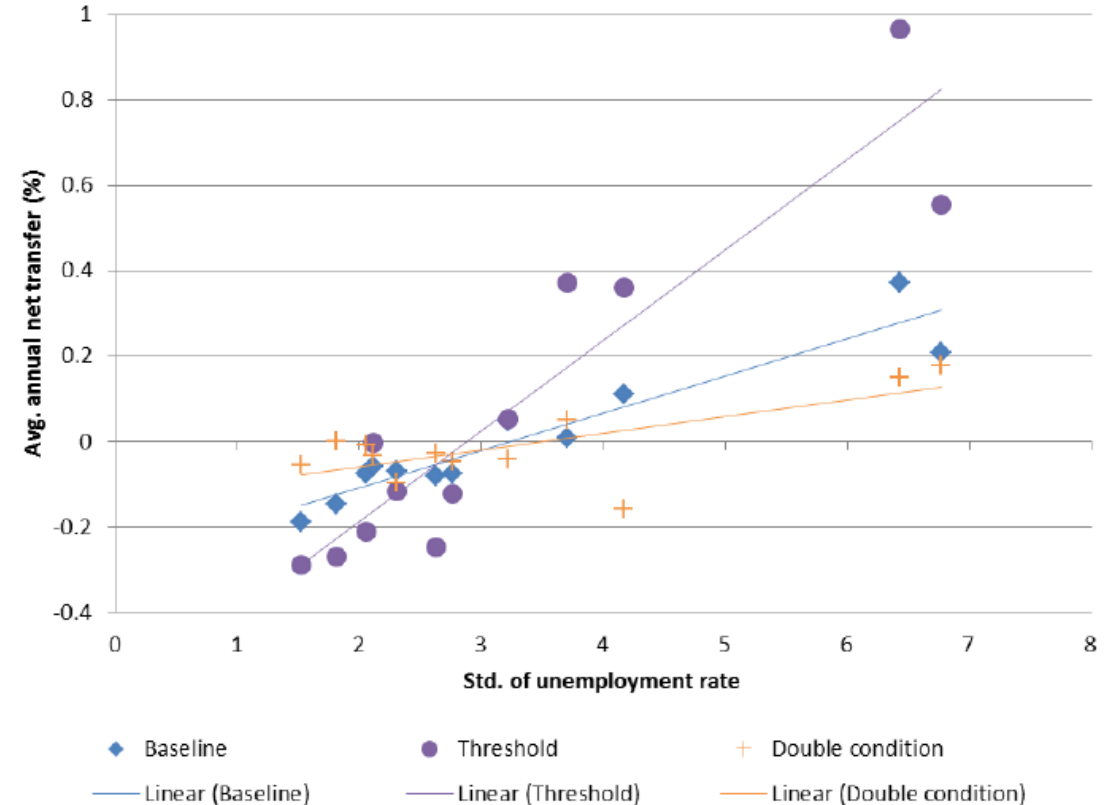
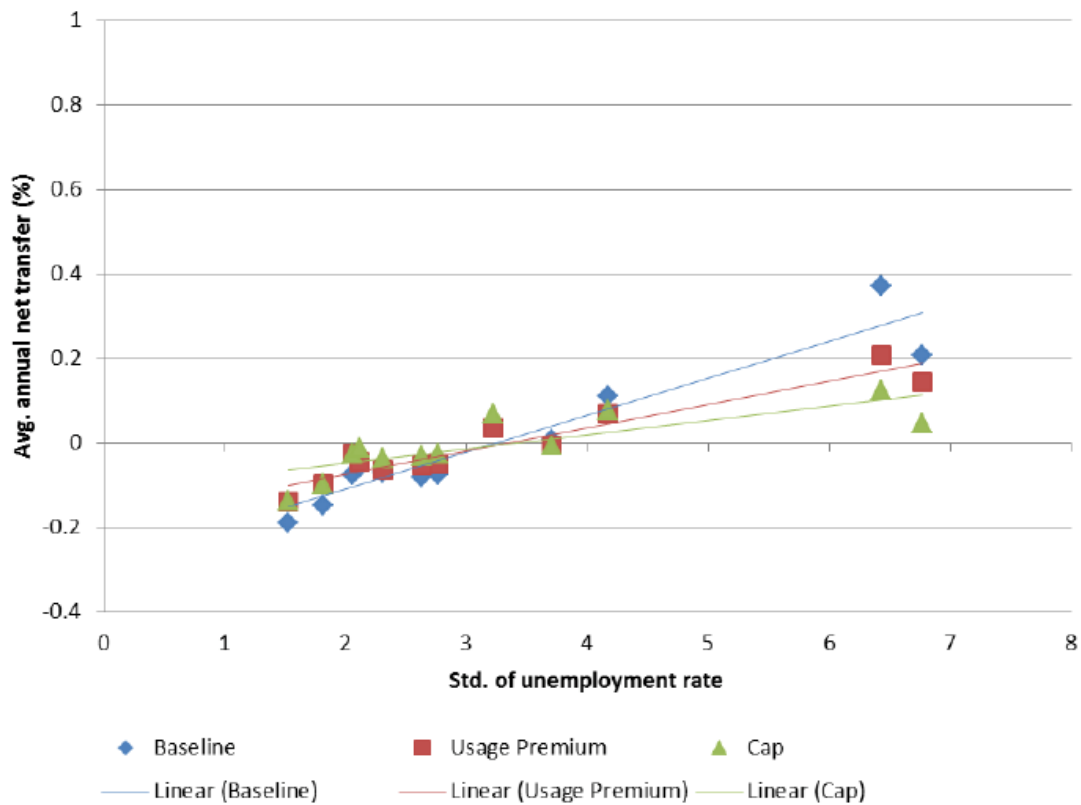
$$TR_{j,t}^n = \alpha_j + \phi_j CUM_{j,t} + \sum_{s=1}^p \delta_s TR_{j,t-s}^n + u_{j,t}$$

- Transfers payed back

$$CUM_{j,t} - CUM_{j,t-h} = \alpha + \beta CUM_{j,t-h} + u_{j,t}$$

	Error correction ϕ		Transfers paid back β		
	mean	median	5 years	10 years	15 years
Baseline	-0.03	-0.04	-0.21	-0.52	-0.54
Usage premium	-0.04	-0.05	-0.40	-0.82	-0.82
Cap	-0.06	-0.07	-0.34	-0.70	-0.79
Threshold	-0.04	-0.05	-0.08	-0.25	-0.17
Double condition	-0.10	-0.10	-0.49	-0.95	-1.16

Structural Differences in Labor Markets

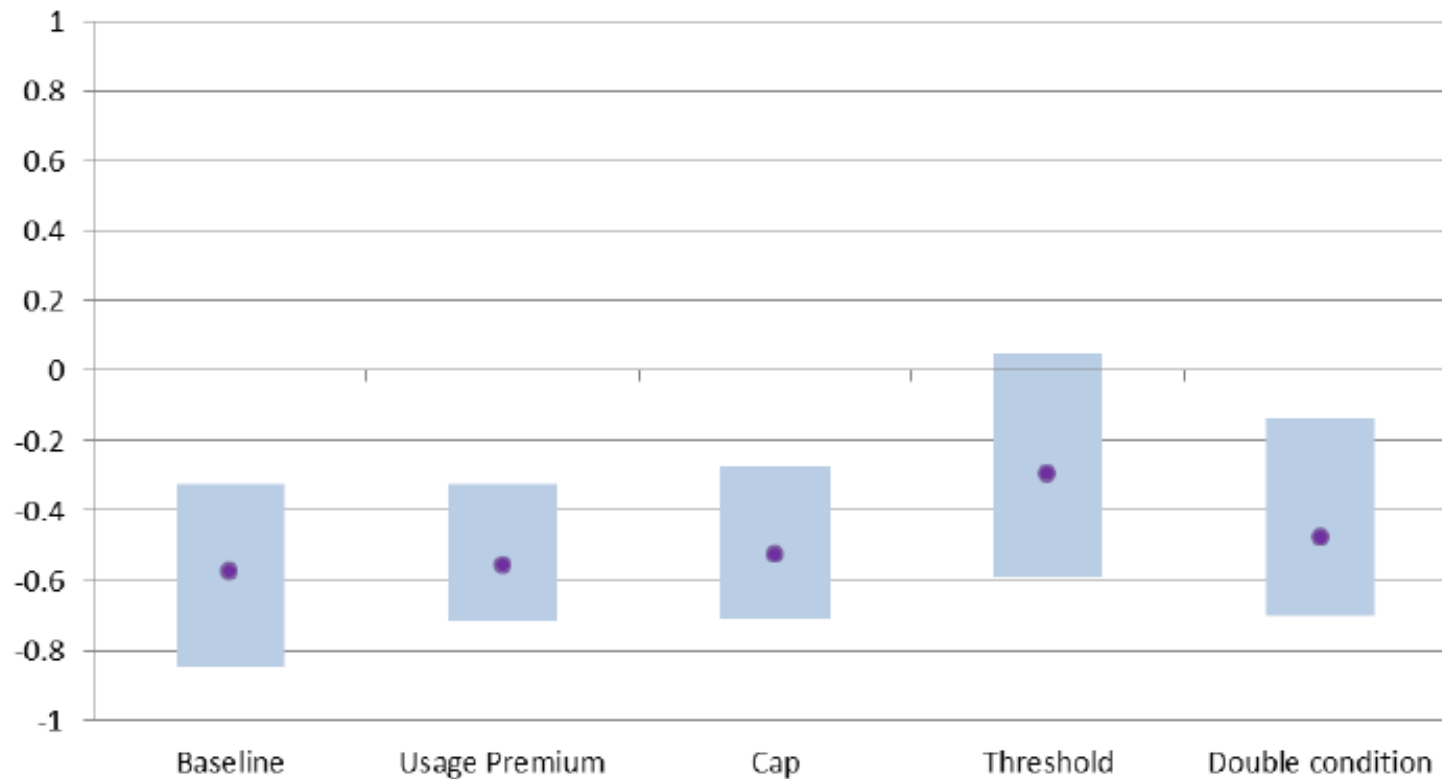


Source: Weiske and Yeter (2019)

Cyclicalities of Transfers

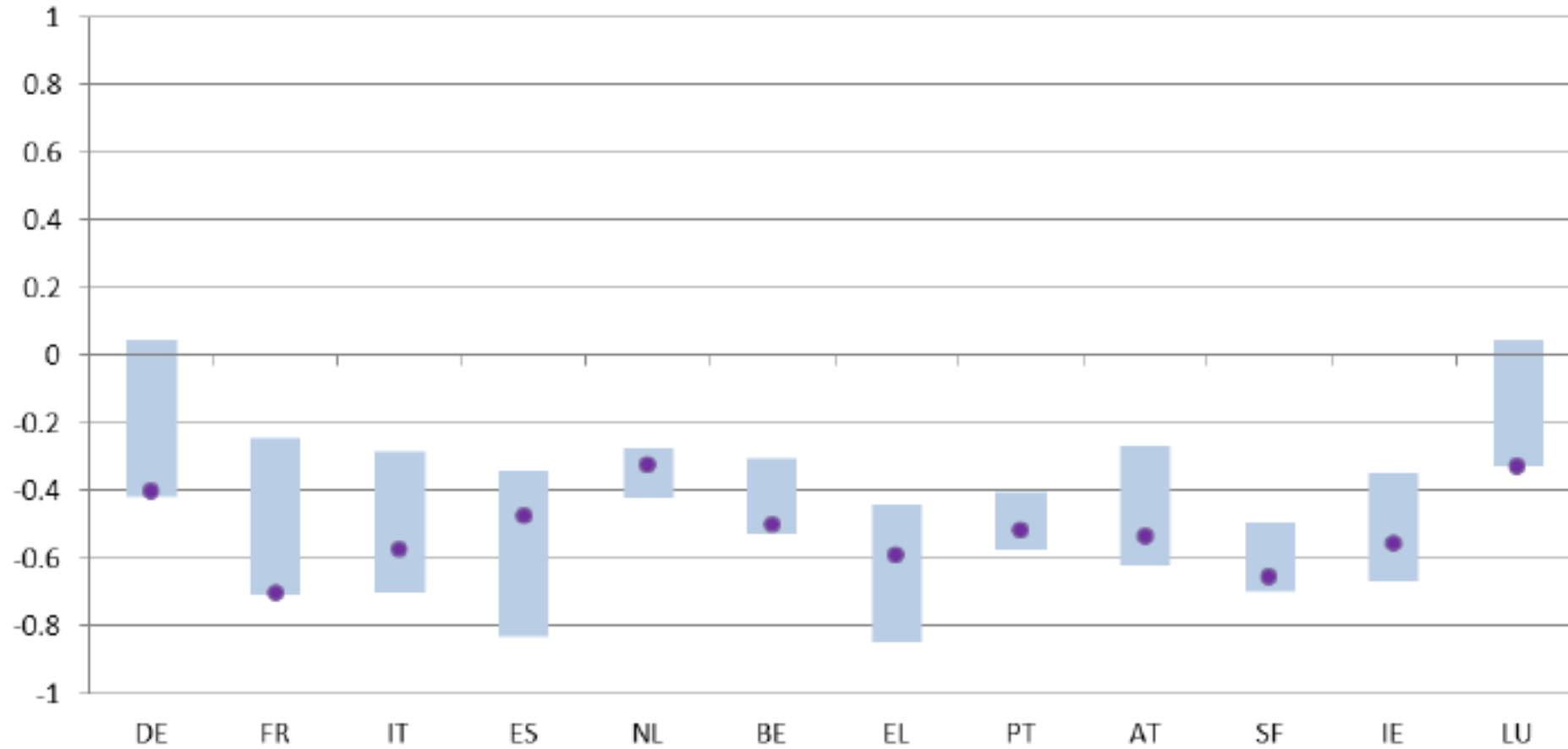
- Correlation between net transfers and output gap

$$\rho_j = \text{corr}(TR_{j,t}^n, gap_{j,t})$$



Source: Weiske and Yeter (2019)

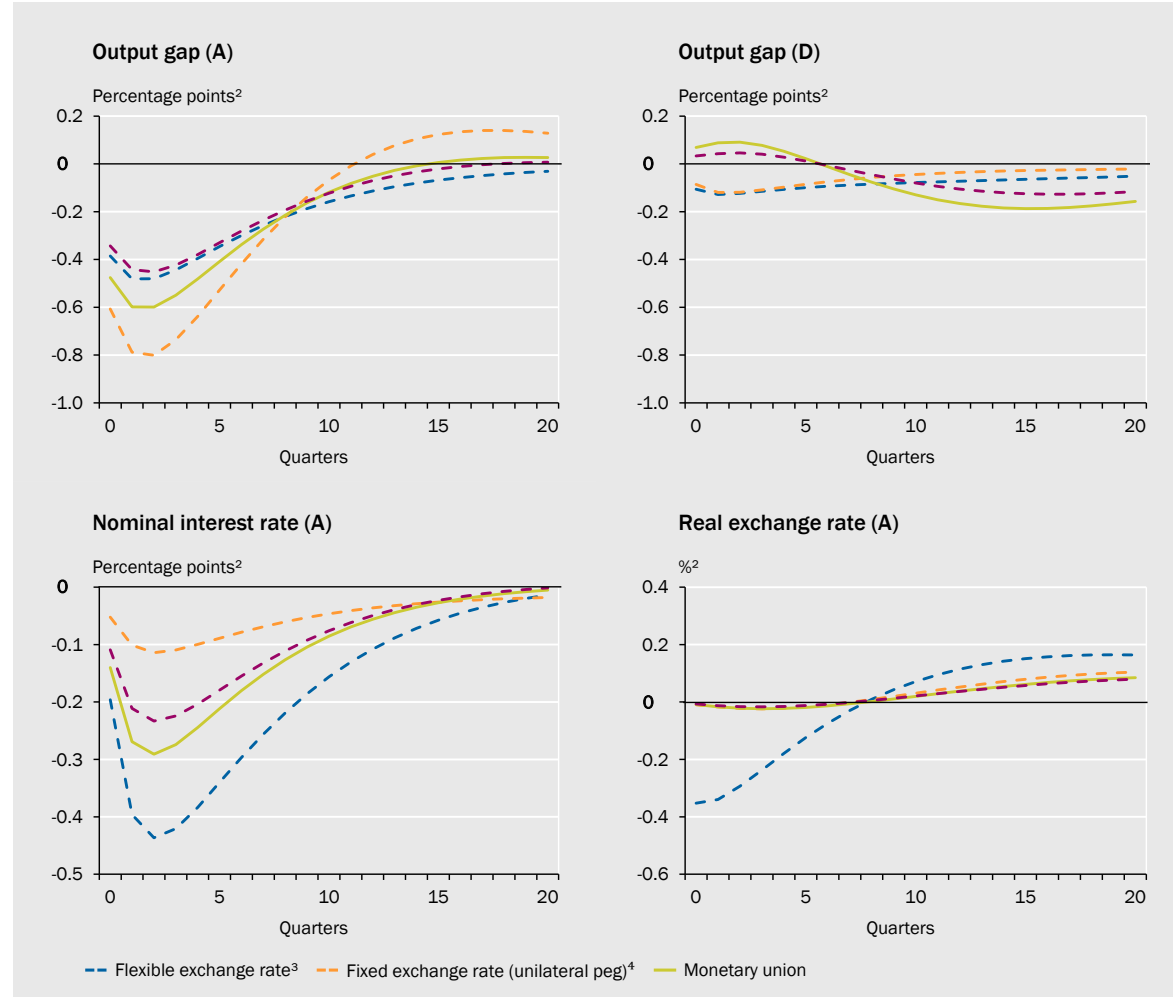
Cyclicalit y of Transfers



Source: Weiske and Yeter (2019)

The Role of National Fiscal Policy

Asymmetrical demand shock in region A: differential political regimes¹



Standard deviation of output gap, inflation and budget balance¹

	Output gap		Inflation		Budget balance	
	Region A ²	Region D ³	Region A ²	Region D ³	Region A ²	Region D ³
Flexible exchange rate ⁴	2.38	2.61	0.96	0.70	0	0
Fixed exchange rate (unilateral peg) ⁵	4.73	2.68	1.12	0.63	0	0
Monetary union	3.05	3.77	0.96	0.71	0	0
Monetary union with countercyclical transfer payments ⁶	2.46	2.92	0.91	0.67	0.83	1.02

1 – Estimated two-country New Keynesian model of the euro area. Seven country-specific shocks (technology, risk premium, investment, government spending, external demand, price and wage rises) in each country and one shared monetary policy shock. Estimation period: Q1 1999 to Q1 2018. The simulations do not take fiscal and monetary shocks into account. Output gap and budget balance in percent of in % of GDP. Inflation rate compared to the same quarter of the previous year. Theoretical moments based on estimated variance/covariance matrix of the shocks. 2 – Region A: France, Italy, Spain, Belgium, Greece, Portugal und Finland. 3 – Region D: Germany, Netherlands und Austria. 4 – Flexible exchange rates between the two regions. 5 – Region A has a fixed exchange rate with region D. 6 – Transfers to non-ricardian households are increased by 0.5 percentage points of GDP in response to a reduction of 1 percentage point in the output gap.

Source: Weiske und Wieland (2018)

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Source: GCEE (2018)

Table 1: Findings on redistributive and stabilizing effects of fiscal mechanisms in the literature

Paper	Country	Time period	Exogenous Variable	Effects of fiscal mechanisms	
				Redistribution	Stabilization
USA and Canada					
Sala-i-Martin and Sachs (1991)	USA (9 regions)	1970-1988	income	n.a.	30-50%
Bayoumi and Masson (1995)	USA (8 regions)	1969-1986	income	22%	30%
	Canada (9 provinces)	1965-1988	income	39%	17%
Asdrubali et al. (1996)	USA (50 states)	1963-1990	regional product	n.a.	13%
Mélitz and Zumer (2002)	USA (48 states)	1960-1994	income	16%	17%
	Canada (9 provinces)	1965-1988	income	16%	10%
Balli et al. (2012)	Canada (10 provinces)	1961-2006	regional product	n.a.	27%
Germany					
Buettner (2002)	West-Germany (10 Länder)	1970-1997	income	n.a.	15-25%
Hepp and von Hagen (2011)	West-Germany (10 Länder)	1970-1994	income	37%	47%
	Germany (16 Länder)	1995-2006	income	39%	19%
Hepp and von Hagen (2013)	West-Germany (10 Länder)	1970-1994	regional product	n.a.	54%
	Germany (16 Länder)	1995-2006	regional product	n.a.	11%
Other European countries					
Mélitz and Zumer (2002)	France (21 regions)	1973-1989	income	38%	17%
	England (12 regions)	1971-1993	income	26%	16%
Decressin (2002)	Italy (20 regions)	1983-1992	regional product	25-35%	10-15%
Andersson (2008)	Sweden (21 regions)	1985-2001	regional product	n.a.	20%

Sources: Own compilation.

Source: Feld et al. (2018)

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