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# **Corporatism and the Labour Income Share**

**Econometric Investigation into the Impact of Institutions  
on the Wage Share of Industrialised Nations**

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# Starting point: new data

- Jahn (2016) developed a new corporatism index
- 42 industrialised countries
- from 1960 to 2010
- average score runs from 2.06 for Austria to -1.65 for the USA
- the agreements in industrial relations and economic policy (especially wage bargaining) are assessed
- the impact of corporatist arrangements has not been analysed extensively in the literature (so far mostly: technological change, globalisation and various other institutional developments)

# Jahn's concept of corporatism

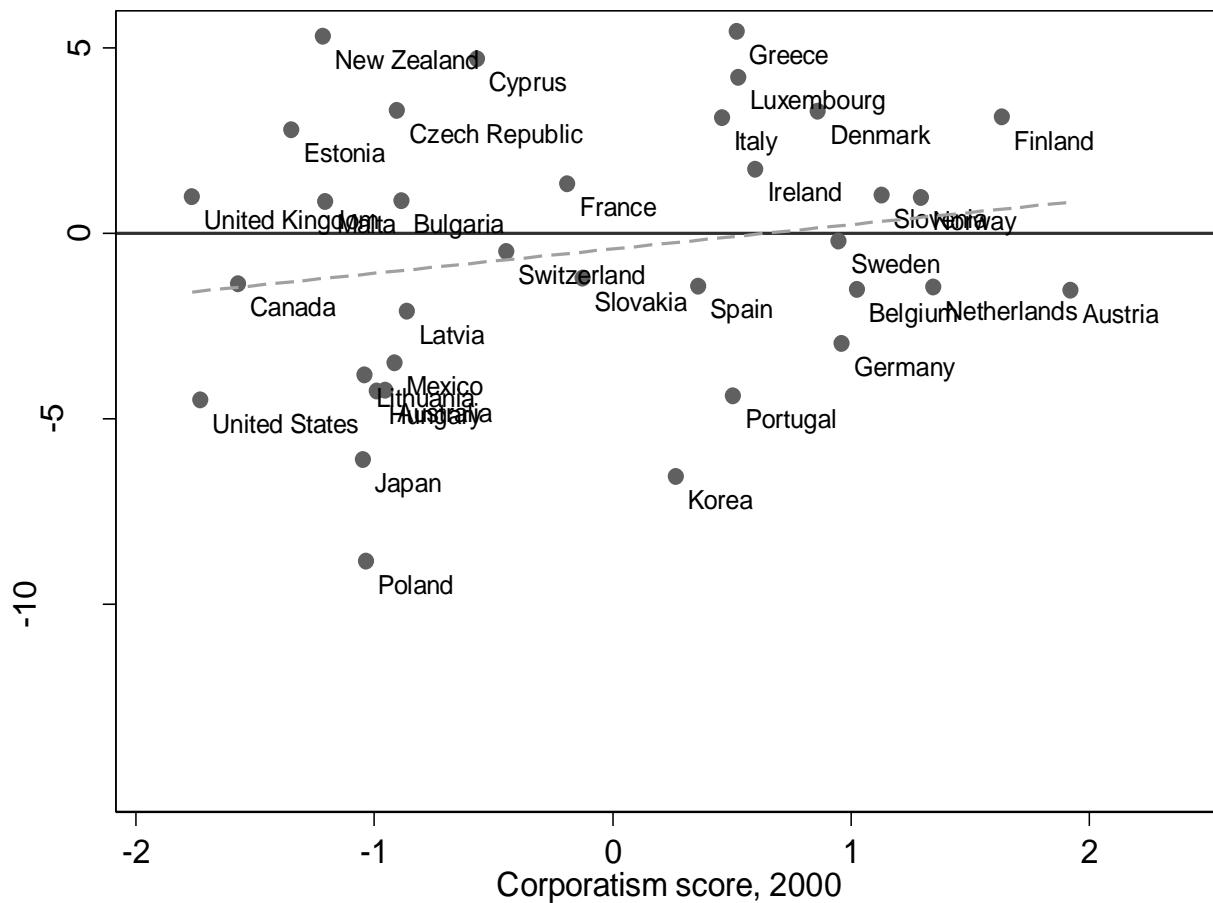
**Table 1** Aspects and forms of corporatism

Aspect	Structure	Function	Scope
Form	Degree of hierarchical centralization	Degree of concertation with the state	Degree to which agreements encompass broader segments of society

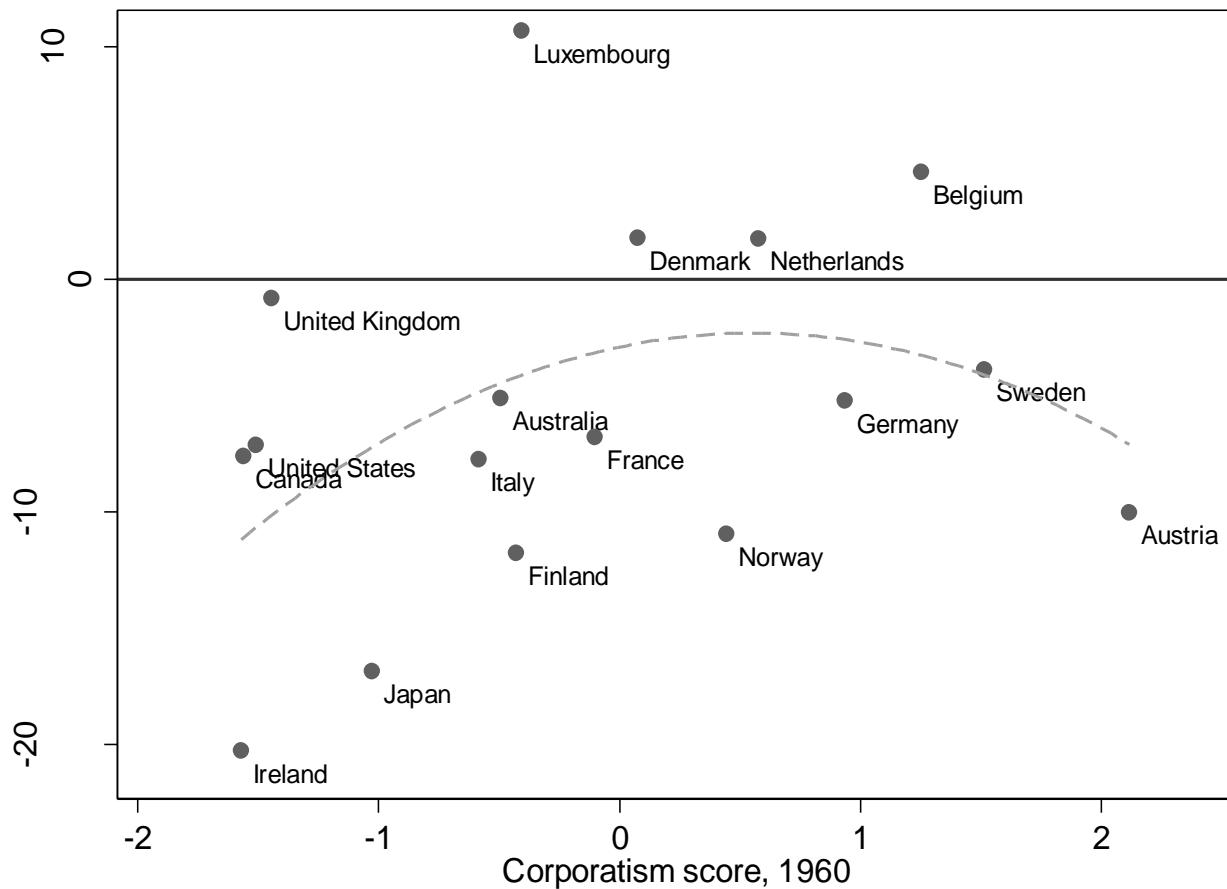
**Table 2** Issues measuring corporatism

Category of corporatism	Issue	Measurement
Structure	I	Organizational structure of collective actors
	II	Structure of work council representation
	III	Rights of work councils
Function	IV	Government intervention in wage bargaining
	V	Dominant level of wage bargaining
Scope	VI	Involvement of unions and employers in government decisions
	VII	Coordination of wage bargaining
	VIII	Mandatory extension of collective agreements

# Corporatism and the labour share in the long run



# Corporatism and the labour share in the very long run



# Research question & hypotheses

- RQ: What is the long run impact of different degrees of economic corporatism on the share of labour in aggregate income of industrialised economies?
- H1: There is a non-linear (inverted-u-shaped) relationship in the very long run
- H2: In the decade around the outbreak of the global financial crisis there is a positive linear relationship

# Data

- Dependent variable: AMECO's (change in) adjusted wage share of the total economy as percentage of GDP at current factor cost
- Main independent variable: Jahn's corporatism index (non-negative and non-zero log of the transformed 5-year smooth score)
- Control variables: institutional data from the Comparative Political Data Set by Armingeon et al. (2016), various data from the Penn World Table (PWT) mark 9.0, Financial Openness Index from Chinn and Ito (2006)

# Baseline model

- Time-series cross-sections dynamic specification fixed-effects estimator error correction model as e.g. in Bengtsson (2014)
- Methodological advantage when possibility of unit root problems cannot be fully rejected
- Baseline model (short and long-run effects):

$$\begin{aligned}\Delta \text{wage share}_{it} &= \alpha + \beta_1 \text{wage share}_{it-1} + \beta_2 \Delta \text{corporatism}_{it} + \beta_3 \text{corporatism}_{it-1} \\ &+ \beta_4 \Delta \text{corporatism}_{it}^2 + \beta_5 \text{corporatism}_{it-1}^2 + \text{country}_i + \text{year}_t + \varepsilon_{it}\end{aligned}$$

# First results

**Table 1:** Baseline model of corporatism and the labour income share in the long run

VARIABLES	(1)	(2)	(3)
	change in wage share	change in average wage	change in employment rate
log corporatism index (lag)	-1.646 (1.110)	-0.017 (0.027)	-1.186 (1.112)
log corporatism index squared (lag)	0.736 (0.534)	0.018 (0.014)	0.863 (0.656)
Observations	1,217	1,207	1,216
R-squared	0.245	0.267	0.291
Number of id	35	35	35
Country FE	YES	YES	YES
Year FE	YES	YES	YES

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Note:* The constant and the coefficients of the lagged dependent as well as the first differenced independent variables are not shown.

*Source:* AMECO, Jahn (2016), own calculations.

NOTHING

# Institutional interaction models

- corporatism AND one of the following:
- left government parties' seat share \*\*\* (ER)
- right government parties' seat share \*\*\* (ER)
- **general government outlays in GDP \*\*\* (WS)**
- union density \*\* (ER)
- regular employment protection index \*\* (ER)
- temporary employment protection index \*\* (AW)
- AND their interactions with corporatism (\*\*\*)

**Table 5: Institutions and corporatism in the long run**

# Extended institutional model

VARIABLES	(22) change in wage share	(23) change in average wage	(24) change in employment rate
log corporatism index (lag)	1.65631 (0.99803)	-0.00785 (0.04645)	-1.80098 (1.39328)
log corporatism index squared (lag)	0.57659 (0.58092)	0.00851 (0.02075)	0.01085 (0.64471)
left gov.parties' seat share (lag)	0.00503 (0.00893)	0.00003 (0.00015)	-0.00873** (0.00397)
corporatism & left gov. (lag)	-0.00006 (0.00654)	0.00003 (0.00011)	0.00779** (0.00340)
right gov.parties' seat share (lag)	0.00564 (0.00360)	-0.00002 (0.00008)	0.00284 (0.00251)
corporatism & right gov. (lag)	-0.00053 (0.00364)	0.00008 (0.00009)	-0.00468* (0.00263)
gen.gov.outlays in GDP (lag)	0.08818*** (0.03125)	0.00039 (0.00075)	-0.06205*** (0.01728)
corporatism & gov.outlays (lag)	-0.07088*** (0.01437)	-0.00048 (0.00052)	0.01335 (0.01570)
union density (lag)	0.01923 (0.02367)	-0.00065 (0.00051)	-0.05611*** (0.01852)
corporatism & union density (lag)	-0.01923 (0.01512)	0.00044 (0.00033)	0.03577** (0.01374)
Observations	957	957	957
R-squared	0.38049	0.32655	0.47464
Number of id	32	32	32
Country FE	YES	YES	YES
Year FE	YES	YES	YES

Robust standard errors in parentheses

\*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

*Note:* The constant and the coefficients of the lagged dependent as well as the first differenced independent variables are not shown.

*Source:* AMECO, Jahn (2016), CPDS, own calculations.

# Hogrefe and Kappler (2013)

## ‘mainstream’ specification

Table 6: Corporatism and other institutions in long-run mainstream specifications

VARIABLES	(25) change in wage share	(26) change in average wage	(27) change in employment rate
log corporatism index (lag)	2.50966** (1.12270)	0.00967 (0.02613)	-1.70910* (0.88314)
left gov.parties' seat share (lag)	-0.00071 (0.00820)	-0.00000 (0.00011)	-0.00909*** (0.00301)
corporatism & left gov. (lag)	0.00162 (0.00004)	0.00001 (0.00008)	0.00901*** (0.00207)
gen.gov.outlays in GDP (lag)	0.08823** (0.03693)	0.00042 (0.00072)	-0.03676** (0.01544)
corporatism & gov.outlays (lag)	-0.07252*** (0.02205)	-0.00057 (0.00052)	0.00304 (0.01392)
union density (lag)	0.00250 (0.02487)	-0.00081 (0.00060)	-0.06703*** (0.02031)
corporatism & union density (lag)	-0.00701 (0.01410)	0.00061 (0.00041)	0.04048*** (0.01440)
capital-output ratio (lag)	-0.00519** (0.00236)	0.00000 (0.00006)	-0.00396** (0.00164)
trade openness (lag)	0.00183 (0.00301)	0.00007 (0.00007)	0.00298 (0.00257)
total factor productivity (lag)	-0.03747*** (0.00628)	-0.00005 (0.00020)	-0.00611 (0.00671)
Observations	957	957	957
R-squared	0.45629	0.34033	0.50152
Number of id	32	32	32
Country FE	YES	YES	YES
Year FE	YES	YES	YES

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Note: The constant and the coefficients of the lagged dependent as well as the first differenced independent variables are not shown.

Source: AMECO, Jahn (2016), CPDS, PWT, own calculations.

# Stockhammer (2015) synthetic specification (in levels only)

Table 7: Corporatism and other institutions in synthetic level specifications

VARIABLES	(28) wage share	(29) average wage	(30) employment rate
log corporatism index	8.865* (4.846)	-0.057 (0.156)	1.539 (8.343)
left gov.parties' seat share	0.027 (0.020)	-0.000 (0.000)	-0.001 (0.015)
corporatism & left gov.	-0.021 (0.018)	-0.000 (0.000)	0.000 (0.011)
gen.gov.outlays in GDP	0.413*** (0.088)	0.009** (0.003)	-0.315* (0.167)
corporatism & gov.outlays	-0.197** (0.077)	-0.003 (0.003)	-0.038 (0.151)
union density	0.047 (0.098)	-0.008*** (0.002)	-0.070 (0.144)
corporatism & union density	-0.023 (0.086)	0.006*** (0.002)	0.052 (0.110)
log real GDP per worker in PPP	-7.616*** (2.044)	0.344*** (0.074)	6.922** (2.953)
growth of real GDP per worker	-0.105*** (0.029)	-0.003*** (0.001)	-0.036 (0.035)
trade openness	0.024** (0.011)	0.001*** (0.000)	-0.029 (0.021)
government consumption share	-0.040 (0.141)	-0.005 (0.003)	0.516*** (0.180)
log financial openness index	0.228 (1.035)	0.017 (0.038)	-2.459** (1.175)
agricultural employment share	0.290* (0.165)	-0.002 (0.004)	-0.529** (0.208)
industrial employment share	0.189* (0.093)	-0.003 (0.003)	-0.090 (0.134)
Observations	822	822	822
R-squared	0.658	0.891	0.543
Number of id	26	26	26
Country FE	YES	YES	YES

Robust standard errors in parentheses

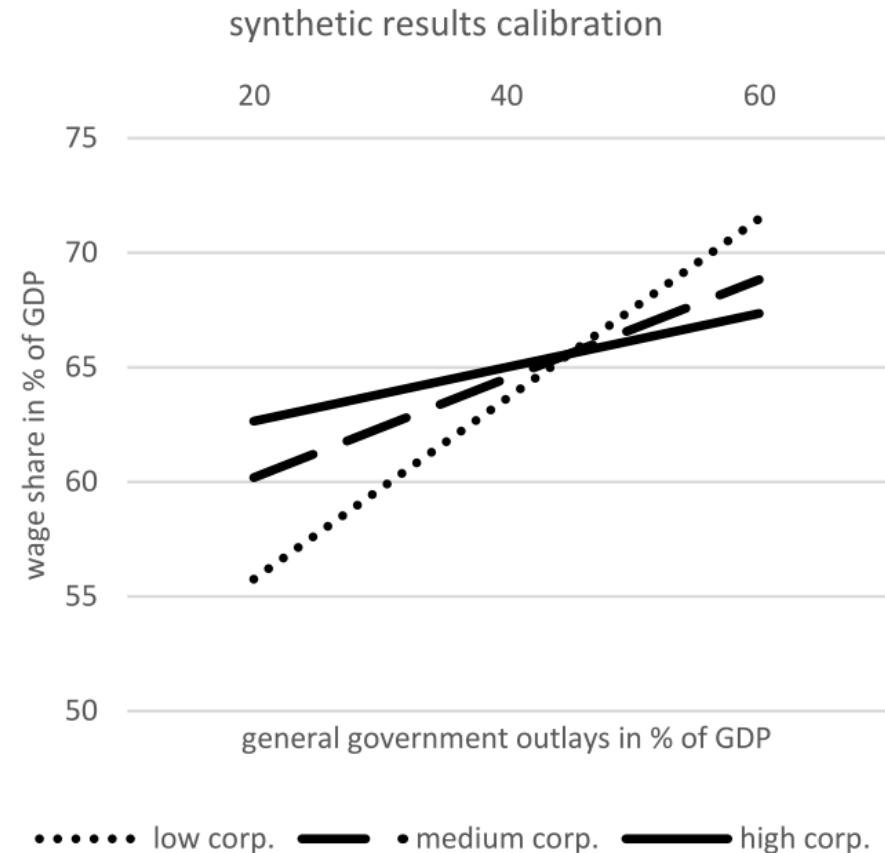
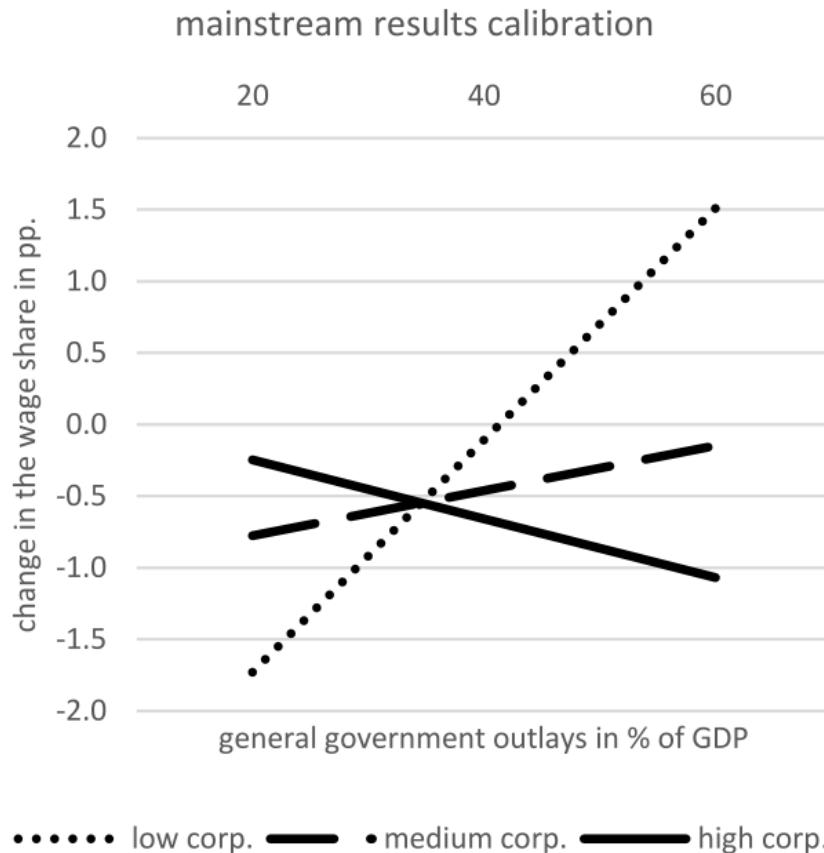
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Note: The constant is not shown.

Source: AMECO, Jahn (2016), CPDS, PWT, Chinn and Ito (2006) own calculations.

# The only robust non-linearity: corporatism & government outlays

**Figure 2:** Corporatism, government and the wage share



Source: own calculations.

# Summary

- original hypotheses could not be confirmed
- only robust interaction explaining change in wage share was corporatism and share of government outlays in GDP (negative sign)
- ad hoc explanation: free-market based Anglo-Saxon countries shift to financial services with distorted wage share statistics; highly corporatist systems with large state keep macro and structural stability with depressed wages and secondary redistribution of incomes

# Conclusions

- where role of state has been reduced, a more centralised wage bargaining system has limited fall in share of labour in national income
- with less prevalent collective bargaining systems, a similar effect can be achieved by higher government spending
- policy recommendation: stronger role for centralized wage bargaining, especially in countries where share of government spending in GDP is low

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Thank you for your attention!

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