Credibly Conservative Monetary Policy and Wage/Price-Bargaining Organization: A Review with Implications for the European Common Currency Area

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Full Paper Available at:
http://www-personal.umich.edu/~franzese
I. OUTLINE ABSTRACT

A. Monetary-Policymaking Delegation: Euro => from many national monetary auth. to one European (conservative) auth.
   
   1. Many other aspects: T-costs & e.r. volatility, int’l bargaining, etc.
   
   2. Focus Here: interactions of one (conservative) ECB with multiple domestic strategic actors, esp. wage/price bargainers.

B. => nominal & real (long-run, equilibrium, on-average) impacts that vary across Euro group, depending on:

   1. Relative (to domestic authorities) ECB conservatism & credibility,

   2. Political-economic (PE) institutional-structural of national PE to which domestic authorities had responded relative to European PE to which ECB will respond, and

   3. Especially critical for real efficiency of national delegation to ECB will be character of domestic wage-bargaining system relative to character of wage/price bargaining at European level.

   4. Equilibrium, long-run, on-average real effects of (perfectly) credible monetary conservatism (with fully rational expectations) arise when other strategic actors whose choices affect real outcomes care about character of monetary policy.
C. Expected Effects:

1. **Nominal (inflation) Interactive Effects:**
   
a. Impact of delegation to monetary cons. depends on how inflationary govt. would have been => where domestic PE most inflationary & domestic CB least autonomous relative to Eur. PE & ECB, most anti-inflationary bite.

b. Italy: formerly relatively dependent CB, politically weak financial & traded sectors, & strong-but-uncoordinated bargaining gains much anti-inflation.

c. Germany: relatively independent CB, strong traded sectors, & coordinated, traded-sector led or highly competitive bargaining gains little anti-inf. bite.

2. **Real (unemployment) Interactive Effects:**

a. Credible conservatism (CC) has *equilibrium* real costs b/c alters relations (interactions) b/w monetary policymakers & wage/price bargainers & other strategic actors, e.g., fiscal/regulatory authorities (i.e., governments)

b. Not just in ° of CC in shift to ECB, but also characteristics of relevant bargaining *audience* in shift from domestic to European policymaking.

c. Those that gain most anti-inflation also generally pay most in lost real-efficacy of bargaining regulation, *but* shift to Europe-level ECB may also undermine real efficacy of bargaining coordination (BC) at relevant level (was domestic, now European) for those that gain little anti-inflation.

d. Italy: swaps relatively strong-but-uncoord. domestic bargaining for similar European system, *but* swaps accommodating domestic monetary authority for non-accommodating European => high anti-inflation at high real cost.

e. Germany: swaps conservative BB for similar ECB => little nominal change, *but* also swaps coord., traded-sector-led bargaining, which interacted well with BB, for strong-but-uncoord. European system interacting w/ ECB => lost real efficiency of monetary/wage-bargaining interaction.

D. **Caveat:** these effects of Euro project may be important & have been ignored, but additional to many other effects, which could offset, more than offset, or exacerbate these real costs from altered bargaining/monetary interactions.
II. Nominal Effects of Delegation to ECB (Franzese 1999)

A. Theory:

1. **Background:** Inflation effects of monetary delegation depend on...

   a. Effectiveness of delegation from government to CB, \( c \), the \(^\circ\) autonomy

   b. Factors to which government-controlled mon. policy would respond, \( X_g \), and how it would respond, \( g(\Omega) = g(X_g) \), e.g. in the std thry: \( y_n^" " \), \( y^* \), etc.

   c. Factors to which CB-controlled policy respond, \( X_c \), & how, \( f(\Omega) = f(X_c) \), e.g. in the std thry: unresponsive \( \Rightarrow \) (low) constant

2. **Implications:**

   a. Inflation is a “convex combination”: (e.g., a linear weighted-average:)

   \[
   Inflation \equiv \pi = c \cdot f(X_c) + (1 - c) \cdot g(X_g)
   \]

   b. Impact of delegation on inflation is conditional:

   (1) *Formally:* Inflation effect of CC depends on everything to which CB and governments respond differently:

   \[
   \frac{dB}{dc} = f(X_c) - g(X_g) = h(x) \cup \{x : df/dx \neq dg/dx\}
   \]

   (2) *Intuitively:* The more (less) inflationary mon. policy would have been under full-govt control relative to policy under full-CB control, the more (less) anti-inflationary punch gained per \(^\circ\) effective delegation.

   (3) *Substance:* Anti-inflation impact of delegation to conservative ECB will vary across country-times depending on how much inflationary pressure there would have been on govt of that country and domestic CB autonomy & conservatism at that time relative to ECB autonomy and conservatism & PE pressures on European governments.
B. **Evidence:** Can model this convex-combo directly, and...

1. Developed democracies (OECD 21) inflation under flexible e.r. (1972-90±) supports $B=\ldots b@\beta_c + (1-b)@X_g\ldots$ strongly over $B=\ldots Xb_x + b@\ldots$

2. **Evidence specifically suggests:**
   a. **Govt responds to** its partisanship, election-years, union power, bargaining coordination, openness, financial-sector strength, & inflation abroad.
   b. **Inflation under CB control is lower & responds much less** if at all to any.
   c. Therefore: anti-inflation effect of CC is greater where $B_g$ greater (e.g., ...)

3. **Application to ECB (assume very autonomous & conservative):**
   a. Countries with high-CC domestic CB’s gain little more from ECB.
   b. Countries w/ weak or strong-but-coord. unions (& strong traded & financial sectors, & right govt) gain little from high-CC CB’s, domestic or ECB.
   c. Only w/ strong-but-uncoord. unions (& weak traded & financial sectors, left govt), & weak domestic CB gain much anti-inflation from ECB delegation.

C. **[Figure] Interesting Aspects of these Results to Note:**

1. By 1990, virtually no country gains any further anti-inflationary bite from effective delegation to a conservative CB (ECB)...
   a. ...because their PE’s already quite anti-inflationary: high & rising openness & financial-sector strength, declining union power, right govt...
   b. ...implying (anti-)inflationary political-economic pressures on govt (high) low, so responsive govts currently do little different than conservative CBs.

2. **So why all impetus toward raising CB autonomy & conservatism?**
   a. **Politics:** Not b/c most anti-inf’ly necessary—political wt behind anti-inf. => least necessary now—but b/c political wt => possible now. Anti-inf. forces leveraging current political strength to entrench preferred monetary stance. (Analogous.)
   b. **Std Theory, Simple Evidence & Anecdotes, & Conventional Wisdom** seemed convincing case delegation to CC was free lunch: anti-inf. gain, w/ no real pain.
Figure 1: Linear-additive & weighted-average estimates of CB’s anti-inflationary impacts given their degree of independence & given the other politico-economic characteristics of that country-year. Estimates for each country 1972-90 plotted from left to right.
III. Real (Unemployment) Effects of Delegation to ECB

A. Std Thry, Simple Evidence, Anecdotes => Conv. Wisdom

1. Std Thry: (Kydland-Prescott, Barro-Gordon, Rogoff, Lohmann, Cukierman)
   a. Nominal+Real Rigidities (e.g., barg.) => incentive for surprise inflation
   b. Private actors know this, & incorporate its inflationary consequences into bargains. In R.E. eqbm, can’t systematically surprise private sector, so average real-effect=0; inflation high.
   c. If could *credibly* commit to refrain from surprises, private actors could set lower wages (prices) without fear, so inflation low & no real-effect.
   d. CB autonomy and conservatism = credible promise to forego monetary surprises, so reduces inflation without real cost on average.

2. Standard Simple Evidence: (Cukierman, Alesina-Summers, others)

3. Prominent “Real-World” Anecdotes: US, Germany, Switzerland: most famously CC of CB’s, share low-inf., widely varying UE.

4. => Conventional Wisdom: delegate to conservative ECB => low infl. at (virtually) no cost! (...but anomalies in words & actions)
B. How Conventional CBI Wisdom Might Mislead

1. **Core Insight:**
   a. (Lindbeck:) std thry assumes core result *ad initio*: \( y=y_n+a(B-B^e) \), \( B^e=B \), with \( y_n \) & a *exogenous*. If endogenous...
   b. When other *strategic* actors’ (e.g., bargainers) choices that affect \( y_n \) or \( a \) depend on nature of monetary policy, real-neutrality conclusion overturned.

2. **Standard CBI and CWB Theories (Conventional Wisdom):**

<table>
<thead>
<tr>
<th>Theory</th>
<th>Prediction</th>
<th>Graphical Illustration</th>
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<tbody>
<tr>
<td><strong>CBI Theory</strong></td>
<td>Credible Conservatism has greater nominal benefits the more inflationary</td>
<td><img src="image" alt="Credible Monetary Conservation" /></td>
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<td></td>
<td>( \frac{d\pi}{dCC}=\pi_*(y_n)-\pi'(y_n) )</td>
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<td></td>
<td>Credible Conservatism has no real effect in equilibrium: ( \frac{dUE}{dCC}=0 )</td>
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<tr>
<td><strong>CWB Theory</strong></td>
<td>Bargaining Coordination has real benefits and (perhaps, possibly smaller) nominal benefits: ( \frac{dUE}{dBC} \frac{dp}{dBC}&lt;0 )</td>
<td><img src="image" alt="Coordination of Wage Bargaining" /></td>
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<td>Bargaining Coordination has non-monotonic real and nominal effects, with most-adverse outcome between its extremes. Exact shape indeterminate.</td>
<td><img src="image" alt="Coordination of Wage/Price Bargaining" /></td>
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IV. Strategic Interaction of Monetary Policymakers & Private Actors

A. Pol.-Econ. General Eqbm: (Calmfors, Ozkan, Sibert, Sutherland)

1. “Discretionary inflation bias” from gap b/w y* & y_n
   a. y_n “too low” for many reasons, including, e.g., “bad” labor-market policies, which, importantly, government also controls.
   b. By 9y_n, “bad” structural policies also 8inflation, which govt also dislikes.
   c. Delegation to conservative ECB drastically reduces these inflation effects, and so incentives for govt to undertake difficult beneficial real “reforms”

=> Delegation to credibly conservative ECB lowers member governments’ incentives to undertake beneficial reforms & thereby has political-economic general equilibrium real costs proportional to its nominal benefits.

2. Alternative Specific Versions of General-Equilibrium PE Effects:
   b. Calmfors (1998): since all Euro members receive nominal benefits of any one’s real reforms, delegation to ECB creates classic collective-action externalities with under-investment in politically costly real reforms.
   c. Other hand: if exchange flexibility was substitute for real reform (Sibert & Sutherland 1998), or if EMU members received side-payments to ignore infl. temptations (Sibert 199), delegation to ECB 8real-reform incentives.

| Illustration of the Theories and Predictions from the Reviewed Work |
|------------------------|------------------------|
| Theory | Prediction | Graphical Illustration |
| GE-PE | Credible conservatism has real costs proportional to its nominal benefits: |
| Theories | dUE \(\propto\) dπ | Expected Nominal or Real Outcome |
| | dCC | Credible Monetary Conservatism (CC) |

Expected Nominal or Real Outcome (E/YCC, dπ=0)

Nominal Outcome (Inflation)  Semiconductor Real Outcome (Unemployment)
B. Strategic Bargainers w/ Varying Coord. (Soskice-Iversen ‘98, ‘99)

1. Coordinated bargaining does two things:
   a. Internalizes more of agg. real-wage externalities of nominal-wage increases w/in more-coordinated bargaining-units, which reduces unemployment.
   b. But also reduces relative-wage (competition) effects on one unit’s nominal-wage increases, which increases unemployment.

2. Delegation to conservative ECB reduces degree monetary policy will accommodate excessive nominal settlements.
   a. Non-accommodation 8 the (beneficial) real-wage effect of coordination.
   b. Non-accomm. affects all bargains equally, so no impact on (deleterious) relative-wage effect (competition-suppression) of coordination.
   c. Combo => equilibrium, real benefits (or costs) of credible monetary conservatism increase (or decrease) in the coordination of bargaining.

=> Delegation to conservative ECB will have less (greater) real benefits (costs) the less coordinated bargaining at the European level relative to at the domestic level.

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<td><strong>Theory</strong></td>
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<tr>
<td>Soskice-</td>
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<td>Iversen-Model</td>
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<tr>
<td>(strategic</td>
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<td>bargainners)</td>
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C. **Strategic, Inflation-Averse Bargainers:** ({many}, Cukierman & Lippi 1999, Velasco & Guzzo 1999)

1. **Justifying Inflation Aversion:**
   a. Empirics: private-sector inflation-aversion is large and well-documented
   b. Symmetry: Std theory inconsistent: monetary authorities dislike inflation, no private actor cares (a logical impossibility for any government)
   c. Inflation-aversion std in CWB thry (if often under-motivated & -specified)
   d. Non-full private-holding-indexation (esp. mandatory: taxes due, pensions)
   e. *Domestic* infl. is a relative (i.e., real) price outside *perfect* float and PPP

2. **A strat., inf.-averse monop. union v. a mon. policymaker** {many}
   b. => CC neutral in real terms *iff* union ignores inflation. *(intuition below)*
      (1) Equilibrium real costs increase in monetary conservatism.
      (2) *Hyper-Liberal* (US sense) CB optimal in real & nominal terms!

3. **Strategic, Inf.-Averse Bargainers w/ Varying Coord.** (C&L, V&G):
   a. Effects from different impact of monetary reactions on real and relative wage effects of nominal wage-increases, hold here too. Plus...
   b. Private-sector inf.-aversion adds another effect to coordination that is also modified by the CC of the monetary authority
      (1) More-coord. bargainers internalize more of the inflation effects of their excess nominal settlements, this increases the benefits of BC.
      (2) But, if delegation to ECB creates more non-accommodation, inf. effects dampened and, with them, bargainers incentives to restraint.
   c. Combo => *real, eqbm* effects of CC that generally worsen going from very-low to low-mid coord. & then improve going from high-mid to very-high.

=> Delegation to conservative ECB greater real costs (less benefits) the more low-to-mid-level bargaining coordination at European level relative to at domestic level.
D. Strategic, Inf.-Averse, Varying Coordination, Continued:

1. Two sources of non-neutrality of CC

a. “Competition-Induced Strategic Non-Neutrality” (“CISNN”):
   (1) (parallels Soskice-Iversen non-neutrality) arises b/c monetary policy magnifies real but leaves relative effect of nominal hikes unchanged.
   (2) Increasingly converts C-D hump into monotonic benefit for BC that increases with higher CC (see figure in B.).

b. Inflation-Aversion-Induced Strategic Non-Neutrality:
   (1) (parallels monopoly-union or PE-GE effect) arises b/c bargainers less incentive to moderate to keep inflation low the greater CC, & esp. so the higher BC (b/c they internalize more of the CB response)
   (2) Increasingly converts Calmfors-Driffill hump to monotonic detriment for BC that worsens with higher CC.

c. Net impact depends critically on assumptions about elasticity of labor demand with respect to real and relative wages and how each changes w/ coordination (exactly the source of the Calmfors-Driffill indeterminacy)
   (1) V-G & C-L differ: in C-L, elasticities go to 4 with the number of bargainers; in V-G, they go to fixed parameter of production function.
   (2) In each, there are also critical parameter values that alter the substantive conclusions:
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<td><strong>Strategic Inflation-Averse Bargainers (C&amp;L)</strong></td>
<td>At high inflation-aversion, Calmfors-Driffill hump emerges whose peak accentuates and shifts up-and-leftward as CC rises.</td>
<td><img src="image1" alt="Graphical Illustration" /></td>
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<tr>
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<td>At low inflation-aversion, BC has monotonic real costs, which CC magnifies more at low than at high BC.</td>
<td><img src="image2" alt="Graphical Illustration" /></td>
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<tr>
<td><strong>Strategic Inflation-Averse Bargainers (V&amp;G)</strong></td>
<td>At high labor-substitutability relative to economies of scale, an inverse Calmfors-Driffill hump emerges, which CC raises, more at very high BC and less noticeably at most levels.</td>
<td><img src="image3" alt="Graphical Illustration" /></td>
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<td>At low labor-substitutability relative to economies of scale, BC has monotonic real benefits, and CC has diminishing costs that are greater at lower than higher BC.</td>
<td><img src="image4" alt="Graphical Illustration" /></td>
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E. Strategic, Differentiated Bargainers: (Iversen, Franzese)

1. Strategic, Differentiated, Wage-Inequality-Averse Bargainers: (Iversen 1998ab)

   a. High BC also tends to equalize wage increase across workers of more-disparate productivity growth => inefficiency unless wage-drift allowed

   b. Non-accommodating monetary authorities now radically worsen the real effects of very-high coordination. The rest is similar to the above.

=> Assuming BC at European level is low-to-mid, delegation to conservative ECB has ambiguous real effects where BC was very-high domestically, sacrifices real benefits where BC was mid-to-high, and small real impact where BC was low.

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<td><strong>Strategic, Differentiated, Wage-Inequality-Averse Bargainers (Iversen)</strong></td>
<td>CC has real benefits that increase from low through mid-BC. From mid-BC, the benefits diminish, becoming real costs at very high BC. From mid-through low BC, CC’s real benefits diminish, becoming no effect at perfect competition.</td>
<td><img src="image" alt="Graphical Illustration" /></td>
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   a. Above+monetary contraction hits traded, non-traded, & public differently
      (1) Hinders real demand, which hurts all private sectors, but public less.
      (2) Raises relative price of traded goods, esp. harming traded sector.
      (3) monetary policy need inflict less/more real pain to restrain traded-sector-led/public bargains, with private, sheltered sector intermediate.
   b. monetary policy => effects depend on relative size & strength of sectors
      (1) Trade-dom. barg. w/ big pub. => best BC effect, most CC-magnified
      (2) Public dom. bargaining w/ large traded worst.
      (3) Sheltered-led & uncoord. intermediate.

=> Costs (benefits) of delegation to ECB greatest (least) where bargaining was more coordinated-and-traded-sector-led domestically relative to European level, etc.

| Illustration of the Theories and Predictions from the Reviewed Work |
| --- | --- | --- |
| **Theory** | **Prediction** | **Graphical Illustration** |
| At high traded-relative-to-public-sector strength, BC is beneficial, and CC has real costs that decrease in BC: \( \frac{dUE}{dCC} > 0 \), \( \frac{d^2UE}{dCCdBC} < 0 \) | Strategic, Sectorally-Differentiated Bargainers (Franzese) |
| At sufficiently high public-to-traded-sector strength, BC is detrimental, and CC has real costs that increase in BC: \( \frac{dUE}{dCC} > 0 \), \( \frac{d^2UE}{dCCdBC} > 0 \) | |
V. Evidence: (Hall, Franzese, Garrett, Way, Iversen, H&F, C&L)

A. (Mostly agree with predictions; details in paper.)

B. As w/ theory, a “fair amount” of disagreement. Problem:

1. Theory suggests complex, non-linear relations b/w bargaining institutional-structure and labor-market outcomes,

2. & then those complex effects are further modified/interact in complex ways by/with delegation to monetary conservatives.

3. Tall order for data from 21 countries over 40 years +/-, esp. since...

4. These institutions exhibit so little cross-time variation

C. Nevertheless, like the theory, two points of agreement:

1. CC has real long-run effects that depend on lab.-mrkt institutional structure, especially the coordination of wage/price bargaining

2. Moving from mid-to-high BC to low-to-mid BC increases (lowers) real costs (benefits) of delegation to CC.

3. I.e., agree that dUE/dCC=f(BC), and that this function downward-sloping over low to mid-high range. (Disagree on +/- & details)

VI. Implications for ECB:

A. Most European countries had moderate BC; bargaining will likely exhibit lower BC across Euro countries

1. => delegation to ECB-controlled Euro policy typically entails shift from mid-to-high domestic BC to low-to-mid European BC

2. => (remarkably) virtually all theory & evidence agree that, regarding its interaction w/ European bargainers, ECB & Euro will be less-beneficial/more-costly than conventional wisdom expected.
VII. CONCLUDING REMARKS:

A. Substantive Keys to Understanding Impacts for Each Country

1. Must consider *credibility & conservatism of European combo of (political) EU authorities and (non-responsive) ECB relative to domestic combo of government and central bank.*

2. Must consider *institutional characteristics, not merely of signal sender, monetary authorities, but also of audience, governments and private actors, and especially the coordination of wage/price bargainers.* Again, domestic *relative* to Europe.

B. Inflation effects of delegation to conservative ECB

1. *Generally smaller* than commonly thought

   both b/c much already felt in EMU, & b/c European PE’s now more anti-inflationary, so govts would do little differently than conservative ECB.

2. *Depend on PE of Europe as a whole relative to domestic PE:*

   Appreciable only where domestic combo of CB and govt relatively infl’ry b/c banks were weak *and* BC, openness, & finance-sector strength low, and union power & left govt strong *relative* to their levels in Europe as whole).

C. Effects of Euro-delegation on real efficacy of wage/price barg.

1. *Depend on institutional-structure of bargaining Europe-wide relative to domestic.*

2. *Net effect country by country depends on whether...*

   a. ...ECB amounts to 8 CC (non-accommodation) and...

   b. ...Europe-wide low-to-mid BC amounts to 8 or 9 from domestic.
3. Generally, more deleterious on these grounds than std thry...
   a. ...either b/c implies loss of effective interaction b/w conservative domestic monetary authorities and mid-to-highly coord. bargainers (e.g., Germany)...
   b. ...or b/c ECB implies greater monetary non-accommodation relative to what domestic authorities had done in countries w/ low-to-mid BC (but high union power) of the sort Europe as a whole is likely to exhibit (e.g., Italy).

D. Reminder of the caveat
   1. Many other effects of Euro project, e.g., financial T-costs
   2. Some may partly, totally, or more than offset these
   3. No claim that these are even the most-important effects, let alone only ones, just that these have been relatively neglected.

E. Prescriptions to improve real-efficiency of interaction of ECB with its wage/price-bargaining audience?
   1. Increase coord. (to moderate-high) of European bargaining?
     Unlikely directly, but pattern-setting system like Germany’s or Japan’s (or US auto) may be possible. Establish norm that lead bargain (traded-led, allowing diverse wage-growth) sets pattern for Euro-zone and ECB responds thereto.
   2. Moderate the ECB Anti-inflationary Conservatism?
     Trade-offs exist; free lunches do not. But, then, lack of anti-inflation zeal is a cost. See also caveat. And this is also unlikely given anti-inflationary interests of modern PE’s.

VIII. Core Insight: CC can have eqbm, long-run, on-average real effects b/c monetary-policy stance can alter eqbm choices of other strategic actors. “Money stock neutral, but monetary rules” & reaction-functions “not.”