The Hidden Friction: Marriage, Gender Norms, and the Macroeconomics of Labor Market Divergence

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STRUCTURAL FRAMING NOTE ON ψ

Definition: ψ represents a norm-induced wage suppression parameter—distinct from standard gender wage gaps—isolated post-marriage, conditional on no childbirth.

Identification Strategy: Estimated from wage deviations using event-time design, with matched male controls, occupation-education fixed effects, and no-fertility conditioning.

Microfoundation: ψ can be interpreted as a structural residual emerging from social norm disutility à la Akerlof and Kranton (2000) or as a transmitted state variable, following Bisin and Verdier (2001).

Role in Macro Model: ψ distorts effective labor input in Cobb-Douglas production. Future extensions allow ψ to affect fertility, human capital, and intergenerational norms.

ABSTRACT

This paper introduces a novel conceptual and empirical framework to analyse how post-marital gender wage divergence—independent of fertility—constitutes a hidden macroeconomic friction. Using high-frequency panel data and a dynamic structural model, we identify this divergence as an endogenous response to prevailing social norms rather than productivity differentials. We formalise these norms as a dynamic friction ψ within an overlapping generations (OLG) macroeconomic framework, quantifying associated GDP and fiscal losses. A cross-country index of ψ is estimated using harmonised household panel surveys and global cultural indicators. Our contribution lies in embedding behavioural constraints into macroeconomic theory, building a quantitative infrastructure for feminist macroeconomics, and proposing empirically grounded interventions. This work seeks to institutionalise gender norms as macroeconomic distortions, thereby reframing inclusive growth modelling and policy design.

Throughout, we treat ψ as a quantifiable deviation from counterfactual market clearing in gendered labor inputs. No ideological claims are imposed ex ante; the distortion is allowed to speak for itself through empirical regularity.

1. INTRODUCTION

Conventional labour economics attributes gender wage gaps to observable differences such as education, hours worked, or fertility. Yet, even after controlling for childbearing, a persistent wage divergence post-marriage remains—particularly in conservative societies. We argue that this divergence is not driven by productivity but by behavioural constraints imposed through gender norms. These frictions, though micro in origin, scale to macroeconomic inefficiencies.

We define this norm-induced divergence as a macro-friction ψ, model it formally, and simulate its effects across output, fiscal policy, labour force participation, and welfare. In doing so, we reconceptualise marriage not merely as a demographic event but as an institutional friction.

Unlike traditional wage gap studies, this framework isolates a specific post-marital suppression effect—ψ—not attributable to fertility, hours, human capital, or occupation, and embeds it as a calibratable, policy-responsive friction in general equilibrium.

Contributions

- Empirical estimation of ψ, a cross-country parameter capturing norm-induced wage suppression.
- Integration of ψ into a dynamic OLG framework to simulate macroeconomic distortions.
- Policy simulations assessing fiscal and growth outcomes under norm-reducing reforms.
- A research agenda establishing behavioural macrofrictions as a foundational pillar in macroeconomic theory.

2. Data and Estimation of ψ

2.1. Data Sources

- Swiss Household Panel (SHP)
- German Socio-Economic Panel (SOEP)
- Household, Income and Labour Dynamics in Australia (HILDA)
- Indian Human Development Survey (IHDS)
- World Values Survey (WVS); Hofstede Cultural Dimensions

2.2. Identification Strategy

We estimate ψ using event study and difference-in-differences techniques, isolating wage trajectories post-marriage among women who do not bear children. Cultural belief indices serve as covariates and interactions, allowing ψ to vary across contexts.

We estimate the latent suppression term ψ using the following specification:

$$\log w_{it}^{f} = \alpha_i + \delta_t + \gamma \cdot \text{PostMarriage}_{it} + \theta X_{it} + \psi_{it} + \varepsilon_{it}$$

where α_i are individual fixed effects, δ_t are time effects, X_{it} includes occupation and region controls, and PostMarriage_{it} is an event-time indicator. The coefficient ψ_{it} captures norm-induced wage divergence, conditional on observable covariates.

To minimize selection bias, we restrict the sample to individuals with comparable pre-marital earnings and observable covariates, apply occupation and region fixed effects, and exploit marriage timing to implement an event-study difference-in-differences design with placebo pre-trends.

2.3. Construction of the ψ Index

Table 1 – *Stylised Estimates of Norm-Induced Wage Suppression (ψ)*

Country	ψ Estimate	Cultural Context
India	0.20	Highly Conservative
Germany	0.12	Conservative
Switzerland	0.08	Moderate
Australia	0.05	Liberal

Interpretation: Higher ψ implies greater norm-induced suppression. Useful for cross-national benchmarking and structural calibration.

3. Conceptual Framework: Norms as Frictions

Social norms impose endogenous constraints on women's labour supply, occupational mobility, and wage returns. We formalise this constraint as:

$$w_{it}^f = (1 - \psi_{it}) \cdot \tilde{w}_{it}^f,$$

where $\tilde{w}_{it}^f$ is the counterfactual wage in a norm-neutral environment. ψ captures suppression post-marriage and is higher in conservative contexts.

By design, $\psi \in [0, 1]$, representing the proportional wedge between actual and counterfactual wages due to normative suppression.

We allow ψ to evolve dynamically:

$$\psi_{t+1} = \phi\psi_t + \theta \cdot \text{Policy}_t + \varepsilon_t,$$

where ϕ measures persistence and θ captures responsiveness to policy interventions.

Unlike classical error terms, ψ is directionally constrained by design—it captures norm-induced wage suppression with no upward deviation, and is bounded within [0,1], distinguishing it from unstructured residual variance.

4. Structural Model: Embedding ψ in an OLG Economy

Each agent $g \in \{m, f\}$ in an overlapping generations model maximises:

$$U^g = \sum_{t=0}^{T} \beta^t u(c_t^g, l_t^g), \quad \text{subject to} \quad c_t^g = w_t^g l_t^g - T_t^g,$$

with wage suppression defined by:

$$w_t^f = (1 - \psi) w_t^m.$$

While the empirically estimated ψ is not endogenously derived within the macro model, it is treated as a structurally consistent calibration parameter, aligned in functional form with its micro-level interpretation as a productivity suppression factor.

ψ reduces the effective labor input of women, abstracting from firm-side behavioral response; general equilibrium extensions could model employer reactions to gendered labor efficiency gaps.

We abstract from intertemporal optimization but note that incorporating a dynamic savings rule of the form $u'(c_t) = \beta(1 + r_{t+1})u'(c_{t+1})$ is a tractable extension.

Mechanisms of Influence

- **Education**: Diminished expected returns discourage investment in female schooling.
- **Fertility**: Higher ψ correlates with earlier marriage and childbirth.
- **Migration**: Urban or international migration is incentivised by high local ψ.

5. Policy Simulations

We simulate three scenarios:

a) $\psi = 0$: Gender norm neutrality.

b) $\psi = \hat{\lambda}$: Current empirical baseline.

c) $\psi_t \searrow$: Gradual decline due to norm-reducing policies.

Evaluation Metrics

- Steady-state GDP growth
- Labour force participation rate
- Fiscal revenues and transfer burdens
- Aggregate welfare loss
  Revealing compounding welfare losses even under modest ψ shifts.

6. Theoretical and Policy Implications

Even modest values of ψ translate into persistent macroeconomic losses. We propose treating ψ as a measurable distortion, justifying targeted subsidies, legal reforms, and cultural campaigns to suppress its persistence.

Future work will decompose ψ via a structural labor supply model or firm-worker fixed effect framework to refine its interpretability beyond residual divergence.

7. Literature Integration

We build on:

- Doepke & Tertilt (2011): Gender and long-run development
- Albanesi (2020): Labour inequality in macroeconomics
- Bisin & Verdier (2001): Cultural transmission in economics
- Acemoglu & Jackson (2017): Evolution of norms

Extension: This work advances Goldin's empirical legacy into dynamic macroeconomic simulation—treating social norms as general equilibrium frictions.

8. Research Frontier: Behavioural Macrofrictions

We propose a new category of macroeconomic inefficiencies: *behavioural macrofrictions*—social norms, cultural biases, and internalised beliefs that distort incentives and decision-making.

Contrast: Unlike market frictions (e.g., price stickiness), behavioural frictions are embedded in beliefs and cultural inertia.

Future Extensions:

- ψ-style frictions in education, credit, and firm ownership
- Intergenerational transmission in dynastic OLG models
- Gendered ψ frictions in trade and spatial migration models

While the current ψ estimates derive from labor outcomes, their theoretical propagation into fertility, migration, and human capital is modeled within the macro framework to enable scenario simulation; these extensions form the basis for ongoing empirical validation.

9. Conclusion

We reposition post-marital gender wage divergence as a structural inefficiency in the macroeconomy—measurable, modelable, and reformable. By embedding ψ into a calibrated macro-framework, we provide a policy-relevant infrastructure for a new generation of inclusive economic models.

Appendix: Output Effects in Cobb–Douglas Framework

Assume:

$$Y_t = A_t (L_t^m)^{\alpha} ((1-\psi) L_t^f)^{1-\alpha}.$$

Then:

$$Y_t' = Y_t \cdot (1-\psi)^{1-\alpha}.$$

For $\psi = 0.1$, $\alpha = 0.6$, the resulting output is approximately 4% lower. The macroeconomic loss from norm-induced frictions is thus significant—even under modest suppression.