Das Sein bestimmt das Bewußtsein: Attitudes towards fiscal policy according to HANK^2

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Motivation

In a monetary union fiscal policy is important, but attitudes towards it differ in Europe

- Different attitudes towards fiscal policies are often portrayed as deep-rooted, national political preferences

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We provide an alternative, materialistic view (thus the anti-idealistic Marx quote)

- Who profits from alternative fiscal policies depends on income, wealth, and portfolio positions.
- These are endogenous responses to incentives created by welfare states.

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- Who profits from alternative fiscal policies depends on income, wealth, and portfolio positions.
- These are endogenous responses to incentives created by welfare states.

Our finding

- Welfare states endogenously create support for "frugal" fiscal policy responses.

Welfare states in the Eurozone

Two stylized welfare state models

- All countries in the EU have unemployment insurance and public pensions,
- but historically they differ strongly in their (view on) minimum income support.

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- Northern model: raise the bottom of the income distribution through minimum income benefits.

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Effects of different welfare states on attitudes towards "frugal" fiscal policy?

Our analysis: fiscal responses to monetary policy shock

Setup

- New Keynesian with incomplete markets, income risks, portfolio choices with two assets.
- Compare two calibrations: factual Italy w/o MIB and counterfactual w/ MIB
- After a monetary tightening, compare two different fiscal responses: "lax" FP vs. balanced budget FP ("tight")
- Let households vote between lax FP and tight FP

Extension: Two-countries in a monetary union

- Same type of HANK model but open economy.
- Two Italies in a MU or actual Italy and actual Germany.

Main findings

Wealth, the welfare state, and government debt

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Welfare state model shapes fiscal attitudes!

- Different attitudes towards fiscal rules emerge endogenously across the income distribution.
- MIB creates support for frugal fiscal policy

Related Literature

Welfare state, the wealth distribution, and asset demand

- Hubbard (1995), Pham-Dao (2019), Mian et al. (2022),...

Heterogeneous Agent Business Cycle Models including optimal policy

- McKay et al. (2016), McKay and Reis (2016), Challe et al. (2017), Kaplan et al. (2018), Bilbiie (2020), Auclert et al. (2018), Bayer et al. (2019), Acharya et al. (2020), Bhandari et al. (2021), LeGrand et al. (2021), Gornemann et al. (2021), McKay and Wolf (2022) ...

Open economy in HANK

- de Ferra et al. (2020), Guo et al. (2020), Auclert et al. (2021), Oskolkov (2021), Zhou (2021), Aggarwal et al. (2022), Bayer et al. (2023)

Monetary and fiscal policy in heterogeneous currency areas

- ... Beetsma and Uhlig (1999), Alesina and Barro (2002), Benigno (2004), Gali and Monacelli (2008), Farhi and Werning (2017), Hettig and Müller (2018), Brunnermeier et al. (2016) ...

Model

Model Setup

Off-the-shelve model

- Two-asset, incomplete markets model with idiosyncratic risk (Bayer et al., 2020).

Extension: two countries in monetary union

- Two-country business cycle model with imperfectly integrated goods and financial markets (Corsetti et al., 2012).

Households		Production	Government
Obtain income	Trade Assets	Produce and differentiate goods	Monetary authority (Two) fiscal authorities
Wages ▶ idiosyn. risk ▶ Sticky wages **Interest on bonds** ▶ set by monetary authority **Illiquid asset** ▶ earns net MPK **All non-wage rents** ▶ go to rich entrepreneurs	**Bonds** = government issued + household borrowing ▶ traded every period **Illiquid assets** = capital (no borrowing) ▶ traded with some probability	**Intermediate goods producers** ▶ rent capital and labor ▶ competitive markets **Resellers** ▶ differentiate goods ▶ set prices (sticky) **Capital goods producers** ▶ Turn final into capital good	**EA monetary authority** ▶ Taylor rule **Fiscal authorities** ▶ Taxes ▶ Fixed spending ▶ Potentially transfers (MIB)

Households: incomplete markets with two assets

- Most households are workers with net labor income:

$$(1-\tau_t^L)w_t h_{it} n_{it} + \mathcal{T}_t(h_{it})$$

  - h_{it} fluctuates over time $\rightarrow$ self-insurance motive
  - transfers, $\mathcal{T}_t$ in the form of MIB, if they exist; we abstract from unemployment (and UIB)
- households save in liquid bonds and illiquid capital (participation in capital market s.t. Calvo friction)
- entrepreneur as additional state: entrepreneurs receive all non-wage rents; stochastic transition between entrepreneurs and workers
- GHH preferences over leisure and consumption.

Fiscal Policy

Government budget constraint

$$\bar{G} + \frac{R_t^b}{\pi_t} B_t + \mathcal{T}_t = B_{t+1} + T_t$$

Tax rate

$$\frac{\tau_t}{\bar{\tau}} = \left(\frac{B_{t+1}}{\bar{B}} \right)^{\gamma_B^\tau}$$

"lax" FP: $\gamma_B^\tau = 0.8$; "harsh" (balanced budget) FP: $\gamma_B^\tau \to \infty$.

Targeted transfer system (if exists)

$$\mathcal{T}_{it} = max\{0, a_1 \bar{y} - a_2(1 - \tau_t^L) w_t h_{it} n_{it}\},$$

with $\bar{y}$ being the median income and $\mathcal{T}_t = \mathbb{E}_{j,t} \mathcal{T}_{it}$.

Monetary Policy

Standard Taylor rule:

$$\frac{R^b_{t+1}}{\bar{R}^b} = \left(\frac{R^b_t}{\bar{R}^b}\right)^{\rho_R} \left(\frac{\pi_t}{\bar{\pi}}\right)^{(1-\rho_R)\theta_\pi} \epsilon^R_t.$$

with π_t being inflation.

Calibration

Calibration strategy: two economics that differ in welfare states

"w/o MIB"

- calibrate to six targets of Italian asset holdings and wealth distribution

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"w/o MIB"

- calibrate to six targets of Italian asset holdings and wealth distribution

"with MIB"

- Introduce MIB but keep all preference and technology parameters fixed
  - lowers demand for bonds
- Exercise: keep interest rate fixed, i.e., the level of insurance on the Euler equation
- Requires small changes in fiscal spending

Skip calibration details

Calibration: parameter table households

	Description	Value	Source/Target
Firms			
α	Share of labor	0.68	62% lab. income
η	Elast. of substitution	11	10% Price markup
η_W	Elast. of substitution	11	10% Wage markup
κ	Price adj. prob.	0.25	1 year avg. price duration
κ_W	Wage adj. prob.	0.25	1 year avg. wage duration
ϕ	Inv. adj. cost	4.0	Bayer et al. (2020)
δ_0	Depreciation rate	0.018	Wealth Gini $= 0.61$
δ_1	Depr. rate increase	5.0	Bayer et al. (2020)

Notes: Parameter values for baseline calibration. Symmetric countries.

Calibration: parameter table firms

	Description	Value	Source/Target
Households			
β	Disc. factor	0.9854	B/Y = 132% annual
λ	Portfolio adj. prob.	0.038	K/Y = 330% annual
ξ	Risk aversion	4	Kaplan and Violante (2014)
γ	Inv. Frisch elast.	2	Chetty et al. (2011)
ρ_h	Pers. labor inc.	0.9815	Standard value
σ_h	STD labor inc.	0.123	Gini market incomes
ζ	Trans. prob. W to E	0.0007	T10 wealth share = 0.44
ι	Trans prob. E to W	0.0625	B50 wealth share = 0.09
$\bar{R}$	Borrowing penalty	0.029	Mass of borrowers = 0.08

Notes: Parameter values for baseline calibration. Symmetric countries.

Calibration: Parameter Table government

	Description	Value	Source/Target
Government			
$\bar{\tau}^L$	Tax rate	0.3	Standard value
$\bar{R}^b$	Gross interest rate	1.00	zero interest-growth difference
ρ_R	Pers. in Taylor rule	0.75	standard value
θ_π	Reaction to Infl.	1.25	standard value

Notes: Parameter values for baseline calibration. Symmetric countries.

Model vs. Data (ITA)

Description	**Data** **ITA** (targeted)	**Model** **w/o MIB**
Debt level to GDP (annual.)	1.32	1.32
Capital to GDP (annual.)	3.30	3.30
Wealth gini	0.61	0.60
Top 10 wealth share	0.44	0.43
Bottom 50 wealth share	0.09	0.10
Mass of borrowers	0.08	0.08

From w/o MIB to with MIB

	Description	**w/o MIB** (Italy)	**with MIB** (German level)
a_1	Transfer level	0	0.5
a_2	Transfer withdrawal rate	0	0.8
G/Y	Government consumption share	0.21	0.20

which makes Italy look surprisingly like Germany

Description	Data ITA (targeted)	Model w/o MIB	Model w/ MIB	Data GER
Debt level to GDP (annual.)	1.32	1.32		
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Mass of borrowers	0.08	0.08		
Minimum income benefit % of median income	≈ 0.00	0.00		

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Description	Data ITA (targeted)	Model w/o MIB	Model w/ MIB	Data GER
Debt level to GDP (annual.)	1.32	1.32	0.95	
Capital to GDP (annual.)	3.30	3.30	3.20	
Wealth gini	0.61	0.60	0.68	
Top 10 wealth share	0.44	0.43	0.49	
Bottom 50 wealth share	0.09	0.10	0.05	
Mass of borrowers	0.08	0.08	0.22	
Minimum income benefit % of median income	≈ 0.00	0.00	0.50	

which makes Italy look surprisingly like Germany

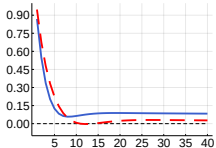
Description	Data ITA (targeted)	Model w/o MIB	Model w/ MIB	Data GER
Debt level to GDP (annual.)	1.32	1.32	0.95	0.71
Capital to GDP (annual.)	3.30	3.30	3.20	3.20
Wealth gini	0.61	0.60	0.68	0.73
Top 10 wealth share	0.44	0.43	0.49	0.53
Bottom 50 wealth share	0.09	0.10	0.05	0.02
Mass of borrowers	0.08	0.08	0.22	0.18
Minimum income benefit % of median income	≈ 0.00	0.00	0.50	≈ 0.50

Monetary & fiscal policy interaction:

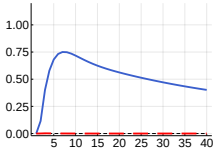
Would you like it short and painful or do you prefer long-lasting scars?

Reaction to a monetary policy shock, w/o MIB

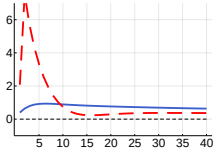
(a) Nom. int. rate, R^b



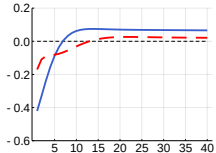
(b) G. debt, $\frac{B}{Y}$



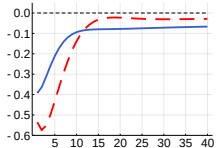
(c) Taxes, τ^L



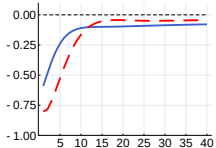
(d) CPI inflation, π^{CPI}



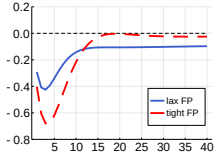
(e) Output, Y



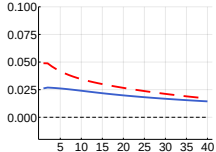
(f) Consumption, C



(g) Investment, I

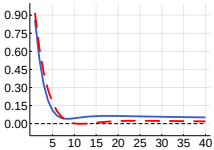


(h) Consumption Gini



Reaction to a monetary policy shock, w/ MIB

(a) Nom. int. rate, R^b



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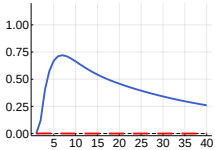

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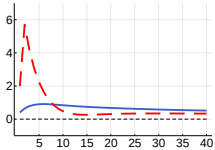

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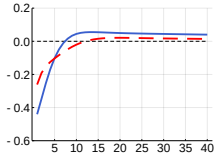

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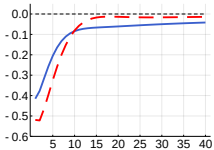

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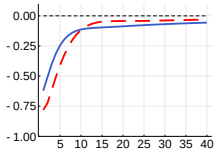

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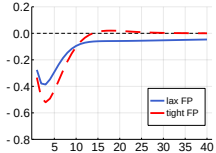

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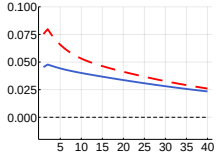


Aggregate behavior

Tight versus lax fiscal policy

- is a trade-off between a harsher immediate contraction and a lasting slump.

Aggregate impact of welfare state

- is mild. With MIB the contraction is a little smaller.
- With MIB the needed tax hike is smaller, because of less government debt.

Being and Preferences

Who favors balanced budgets based on a welfare assessment?

One sided welfare consequences

The different fiscal responses have heterogeneous effects

- FP reaction shifts the tax burden over time
- Better insured households can deal better with recessions...

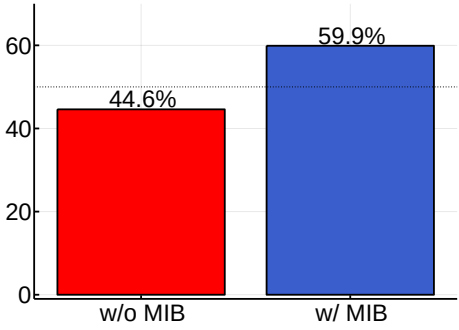
Calculate consumption equivalent welfare effects with both responses

- For all b, k, h combination at the time of the shock. Welfare graphs

Our focus: welfare difference based voting

- Majority for or against tight fiscal policy?
- How does existence of MIB shapes this?

Welfare difference based voting



Favoring tight FP

Dealing with a monetary tightening

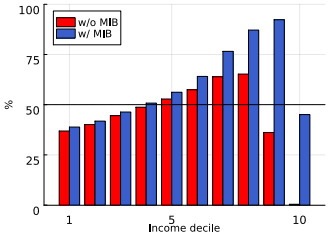
- With MIB: majority for restrictive policy.
- Without MIB: majority for lax policy.

In an expansion (mutatis mutandis):

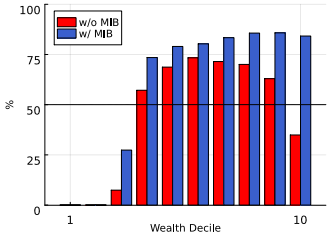
- Majority w/o MIB for balanced budget.
- I.e., lower taxes when you can.

Who votes for tight fiscal policy?

(a) Votes along income distribution



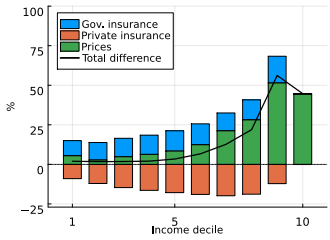
(b) Votes along the wealth distribution



- MIB changes the attitude of the upper middle class

The effects of MIB on the political support of tight fiscal policy

(a) Overall decomposition



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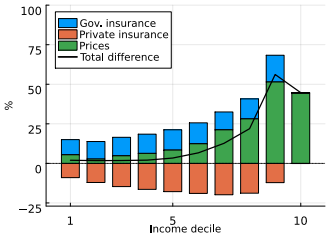
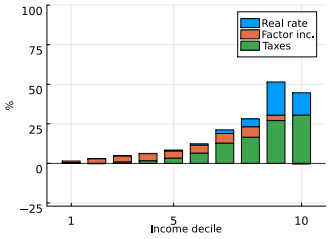


(b) Zooming in on the GE prices



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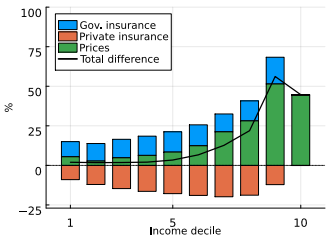

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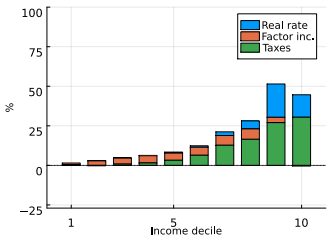

1. Direct effect: softens negative effects of deeper recession $\rightarrow$ increases support
2. Wealth distribution effect: hhs hold less assets $\rightarrow$ lowers support
3. Budget/tax effect: less of a tax hike $\rightarrow$ increases support by the rich
4. Interest rate effect: real rate paths lowered less $\rightarrow$ increases support by the rich

Extension to a monetary union

The others should clearly keep their house in order!

Extend the setup

Results remain the same in a MU

- Two countries with initially zero NFA.
- Standard international NK Model
- Country A: "w/o MIB"
- Country B: "with MIB"
- Vote over union-wide fiscal rule

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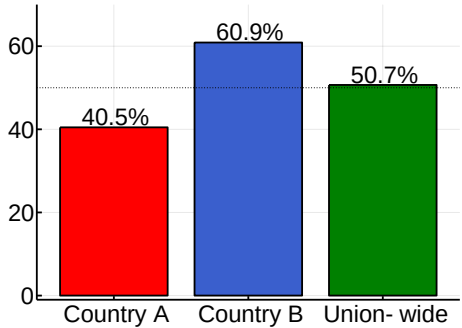

Favoring tight FP

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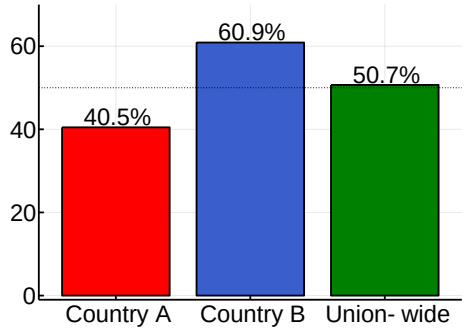


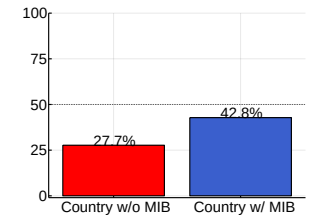
Favoring tight FP

Next: Look at majorities in voting only regarding asymmetric fiscal policy responses.

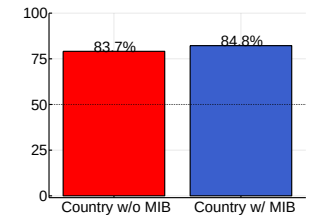
Political support for tight fiscal policy

Vote over...

own country's fiscal policy



other country's fiscal policy



Assuming balanced budget in the respective other country

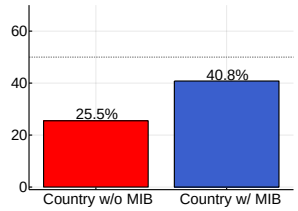
MU & fiscal externalities

- Taxes impose an externality on the other country.
- They improve ToT, but in a MU only in the long run.
- Each country wants the other to balance budget.

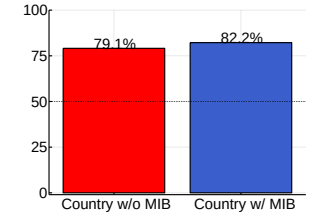
Political support for tight fiscal policy

Vote over...

own country's fiscal policy



other country's fiscal policy



Assuming lax fiscal policy in the respective other country

Median voter's stance is

- mostly independent on the fiscal stance that is fixed,
- but balanced budgets are political complements.

Conclusion

When households face income risks

- Difference in welfare states generate differences in wealth distributions and public debt.

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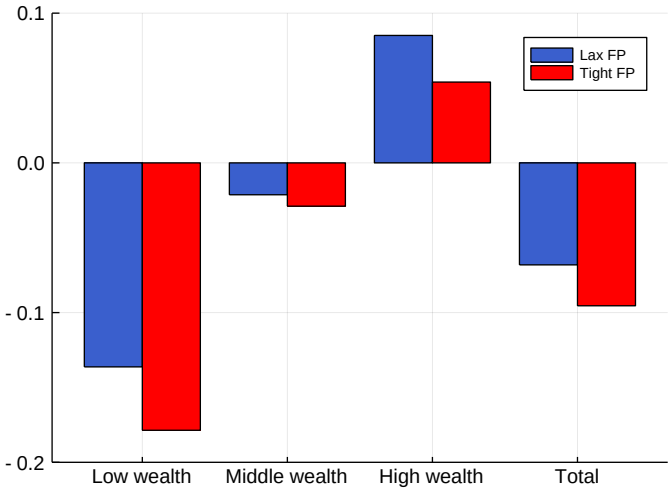
But welfare states shape fiscal attitudes

- MIB creates political support for more balanced budget fiscal rules.

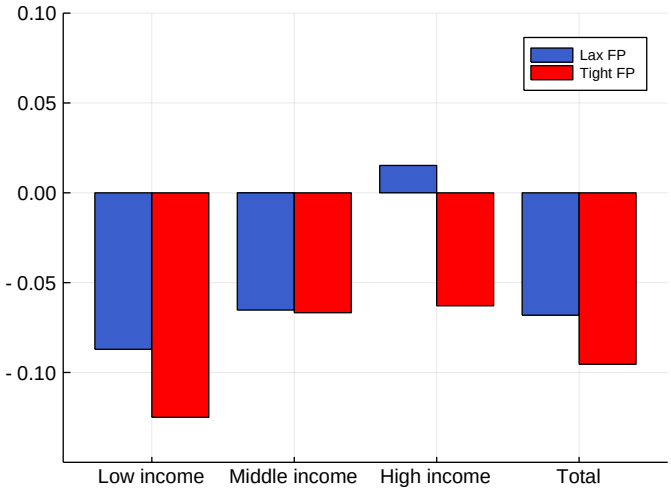
Appendix

Along wealth distribution: w/o MIB



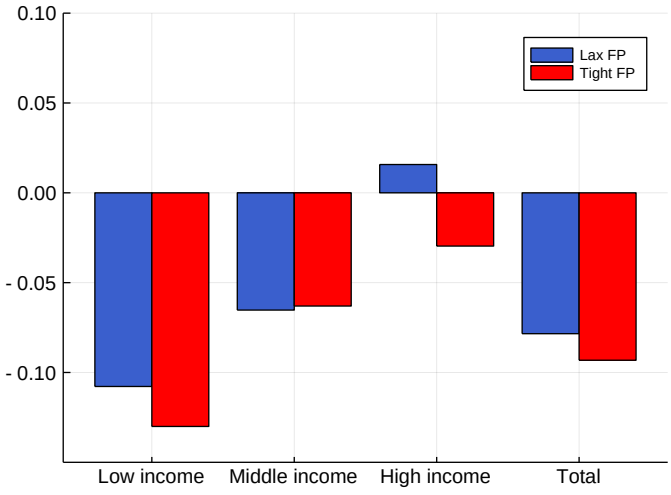
- Strong gradient of welfare in wealth/income.

Along wealth distribution: w/o MIB



- Strong gradient of welfare in wealth/income.

Along income distribution: w/ MIB



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