Varieties of Capitalism, Increasing Income Inequality, and the Sustainability of Long-Run Growth

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Background and Purpose

- Paper builds on (Setterfield and Kim, 2016; Setterfield et al., 2016)
- Previous work investigates effects of rising inequality, in the presence of emulation effects and fundamental uncertainty about consequences of debt accumulation, on rate of growth and its sustainability
- This paper explores two important extensions of this earlier work

Outline of Presentation

- Previous research and results
- Extensions
 - theory: borrowing and the decline of the social wage
 - application: varieties of capitalism (Germany vs US)

Previous Research: Model

- Stock-flow consistent Kaleckian model
- Banks: passive intermediaries
- Firms:
 - Produce output using capital, managers, and production workers
 - Price according to standard mark up over direct (labour) costs
 - Invest in direct relation to the profit rate and "animal spirits"

Previous Research: Model (cont.)

- Rentier households consume conventional fraction of their income (profit, managerial salaries, interest income)
- Worker households consume conventional fraction of their wage income *and* consume by borrowing from rentiers
- Workers' total consumption influenced by propensity to emulate consumption of rentiers

Previous Research: Results (overview)

Main findings:

- Increased income inequality that spurs household borrowing can boost growth ("consumption-driven, profit-led growth" (Kapeller and Schütz, 2015))
- ... but undermine financial sustainability of the growth regime
- Potentially positive impact of debt servicing (not just borrowing) on growth
- Precise form of debt servicing behavior has qualitative effect on debt dynamics

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Extensions: 1. Borrowing and the Decline of the Social Wage

- As social wage diminishes, households forced to increase private consumption expenditures merely to *maintain* established consumption standards
- So not just emulation effects ("keeping up with the Joneses") driving borrowing
- Write:

$$C_W = W_r L - i D_W + C^T$$

where:

$$C^{T} = \beta C_{R} - \omega_{S}$$

and ω_s denotes the social wage.

Extensions: 1. Borrowing and the Decline of the Social Wage (cont.)

• Assume that:

$$\omega_{S} = t \Pi$$

(social wage entirely funded by tax on profits)

• Substituting into expression for C_W :

$$C_W = W_r L - i D_W + \beta C_R - t \Pi$$

Extensions: 1. Borrowing and the Decline of the Social Wage (cont.)

• Now consider workers' budget constraint:

$$W_r L + \dot{D}_W = C_W + i D_W$$

SO:

$$\dot{D}_W = C_W + iD_W - W_r L$$

Substituting expression for C_W :

$$\dot{D}_W = \beta C_R - t \Pi$$

Extensions: 1. Borrowing and the Decline of the Social Wage (cont.)

• Capitalist consumption net of tax:

$$C_R = (1 - s_R)([1 - t]\Pi + iD_W)$$

Substituting into expression for \dot{D}_W :

$$\dot{D}_W = \beta(1-s_R)([1-t]\Pi+iD_W)-t\Pi$$

Simplifying and standardizing by K:

$$\dot{d}_W = \beta(1-s_R)(\pi u + id_W) - (1-\beta[1-s_R])t\pi u$$

Extensions: 1. Borrowing and the Decline of the Social Wage (cont.)

- Now have new distributional variable, *t*, that indirectly affects rate at which workers borrow
- This is for two reasons:
 - decrease in *t* results in lower social wage which stimulates more borrowing, as workers try to make up for the loss of publicly-provided consumption goods by increasing private expenditures
 - decrease in *t* raises capitalist consumption, which stimulates worker borrowing and spending through emulation effects
- Question: what is marginal contribution of observed decline in taxes on profit to household debt dynamics and financial fragility of neoliberal growth regime?

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Extensions: 2. Varieties of Capitalism and Sustainability

Results of previous research based on numerical simulations:

Parameter	Value	Source
cW	0.94	Author's calculations based on Bunting (1998)
c_{π}	0.20	Setterfield and Budd (2011)
β	0.10	Author's calculations
λ	0.29	Ravina (2007)
δ	74.89	Author's calculations based on Mishel and Sabadish (2012)
ϕ	2.27	Author's calculations based on Mishel et al. (2007)
α	0.25	Author's calculations based on (Mishel et al., 2007, p.118)
ω_p	0.42	Author's calculations based on Mohun (2006), Figure 7
π	0.34	Setterfield and Budd (2011)
κ ₀	0.095 or 0.045	Author's calculations
ĸr	0.5	Lavoie and Godley (1 02), Skott and Ryoo (2008)
i	0.0481	Author's calculations based on World Bank Data

Extensions: 2. Varieties of Capitalism and Sustainability (cont.)

Future work:

- Re-calibrate key distributional parameters to economies other than US (e.g., Germany)
- Sustainability of *varieties* of capitalism:
 - are there different "distributional regimes" across different varieties of capitalism during the neoliberal era?
 - do these affect debt dynamics and sustainability of growth?
 - e.g., how would US capitalism have fared with a German neoliberal distributional regime?

Bunting, D. (1998). Distributional basis of aggregate consumption. Journal of Post Keynesian Economics 20(3), 389–413.

- Kapeller, J. and B. Schütz (2015). Conspicuous consumption, inequality and debt: The nature of consumption-driven profit-led regimes. *Metroeconomica* 66(1), 51–70.
- Lavoie, M. and W. Godley (2001-02). Kaleckian models of growth in a coherent stock-flow monetary framework. *Journal of Post Keynesian Economics* 24(2), 277–311.
- Mishel, L., J. Bernstein, and S. Allegretto (2007). *The State of Working America 2006/2007*. Ithaca, NY: Cornell University Press.
- Mishel, L. and N. Sabadish (2012). CEO pay and the top 1 percent: how executive compensation and financial-sector pay have fueled income inequality. Issue brief 331, Economic Policy Institute.

- Mohun, S. (2006). Distributive shares in the US economy, 1964-2001. *Cambridge Journal of Economics 30*(3), 347–370.
- Ravina, E. (2007). Habit formation and keeping up with the Joneses: evidence from micro data.

http://ssrn.com/abstract=928248.

- Setterfield, M. and A. Budd (2011). A Keynes-Kalecki model of cyclical growth with agent-based features. In P. Arestis (Ed.), *Microeconomics, Macroeconomics and Economic Policy: Essays in Honour of Malcolm Sawyer*, pp. 228–50. London: Palgrave Macmillan.
- Setterfield, M. and Y. K. Kim (2016). Debt servicing, aggregate consumption, and growth. *Structural Change and Economic Dynamics 36*, 22–33.
- Setterfield, M., Y. K. Kim, and J. Rees (2016). Inequality, debt servicing, and the sustainability of steady state growth. *Review of Political Economy*.

Skott, P. and S. Ryoo (2008). Macroeconomic implications of financialisation. *Cambridge Journal of Economics 32*(6), 827–862.