TALL
SOM FORTELLER

Heterogeneous Agents at Norges Bank

COMMENTS BY THOMAS VON BRASCH

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Your model vs. Nemo?

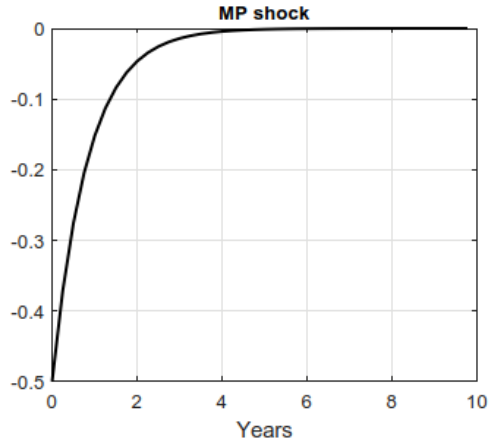
Monetary Policy According to HANK†

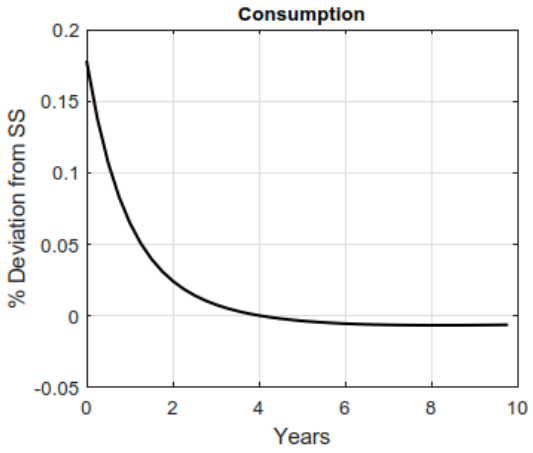
By Greg Kaplan, Benjamin Moll, and Giovanni L. Violante*

We revisit the transmission mechanism from monetary policy to household consumption in a Heterogeneous Agent New Keynesian (HANK) model. The model yields empirically realistic distributions of wealth and marginal propensities to consume because of two features: uninsurable income shocks and multiple assets with different degrees of liquidity and different returns. In this environment, the indirect effects of an unexpected cut in interest rates, which operate through a general equilibrium increase in labor demand, far outweigh direct effects such as intertemporal substitution. This finding is in stark contrast to small- and medium-scale Representative Agent New Keynesian (RANK) economies, where the substitution channel drives virtually all of the transmission from interest rates to consumption. Failure of Ricardian equivalence implies that, in HANK models, the fiscal reaction to the monetary expansion is a key determinant of the overall size of the macroeconomic response. (*JEL* D31, E12, E21, E24, E43, E52, E62)

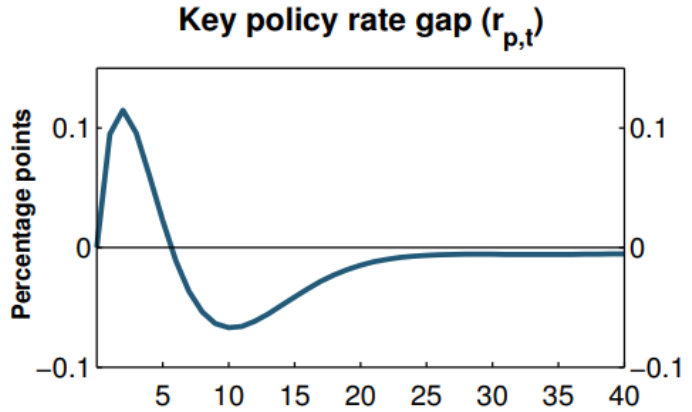
American Economic Review 2018, 108(3): 697–743
https://doi.org/10.1257/aer.20160042

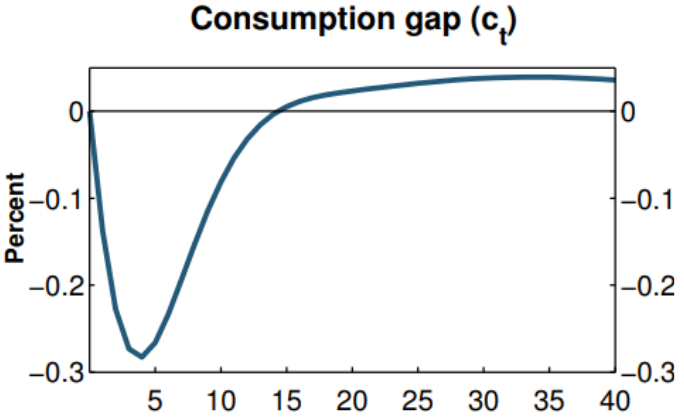
Your model





Nemo





Gerdrup et al. (2017)

Gerdrup et al. 2017. Documentation of NEMO - Norges Bank's core model for monetary policy analysis and forecasting. Staff Memo No 8. Norges Bank

Is your model calibrated to Norwegian data?

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Your model =

Monetary policy			
ϕ_π	1.25	Taylor coefficient on inflation	Kaplan et al. (2018)
ϕ_y	0	Taylor coefficient on output	Kaplan et al. (2018)

Is your model calibrated to Norwegian data?

Your model =

Monetary policy			
ϕ_π	1.25	Taylor coefficient on inflation	Kaplan et al. (2018)
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Norges Bank ≈

$$i = \pi^* + r^* + 1{,}5 \cdot (\pi - \pi^*) + 0{,}5 \cdot y$$

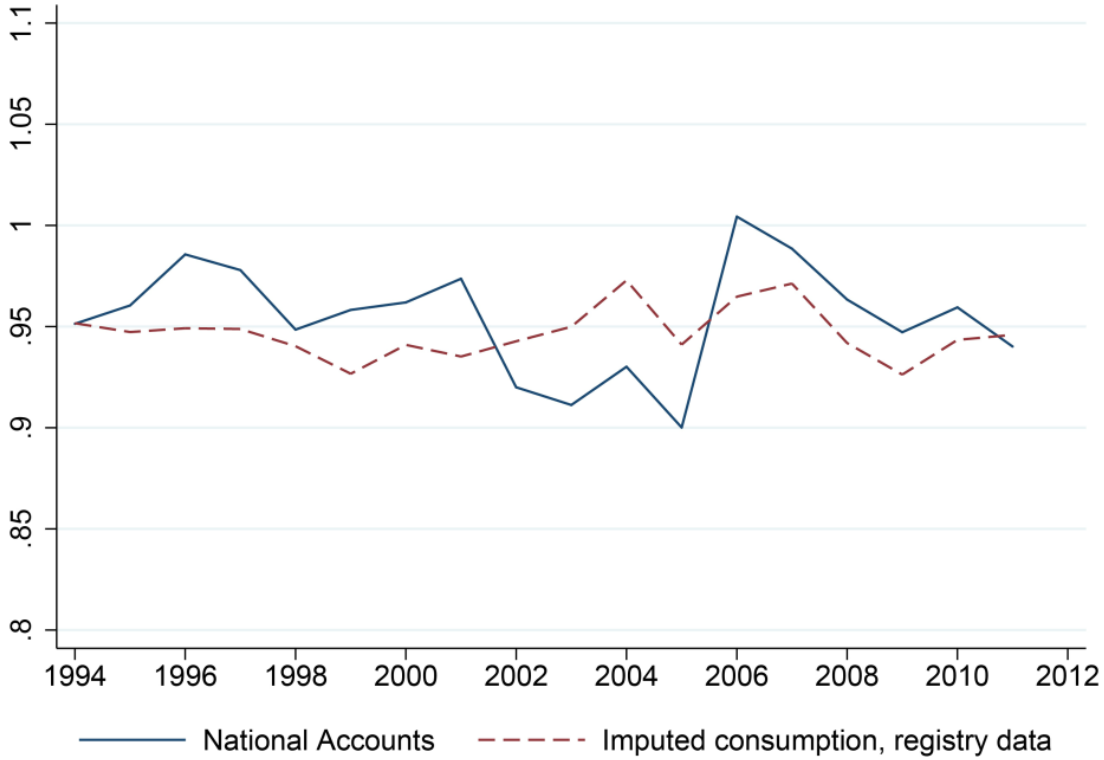
Norges Bank Memo. Erfaringer med pengepolitikken i Norge siden 2001. Nr 1. 2017.

Register data and imputed consumption

- Imputed nominal consumption
  - What definition of income do you use?
  - How do you deal with real estate investments?
  - What do you do about the value of owner-occupied housing services ?
  - How do you deal with capital gains on financial assets?
  - How do you treat valuables (antiques, art objects etc.)?
  - Have you compared your data with data from the national accounts?
- Imputed real consumption? Have you also made price indices, and if so, how?

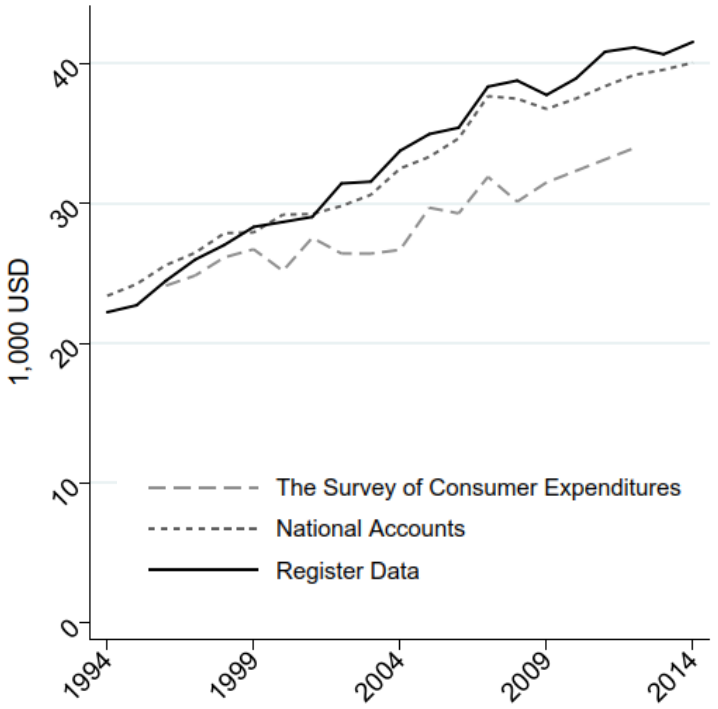
Register data and imputed consumption

Consumption as a fraction of disposable income



Source: Fagereng and Halvorsen (2017)

Consumption, USD



Source: Eika, Mogstad and Vestad (2019)

Fagereng, A., & Halvorsen, E. (2017). Imputing consumption from Norwegian income and wealth registry data. *Journal of Economic and Social Measurement*, *42*(1), 67–100

Eika, L., Mogstad, M. and Vestad, O. 2019. What Can We Learn About Household Consumption from Information on Income and Wealth? Revise, Journal of Public Economics

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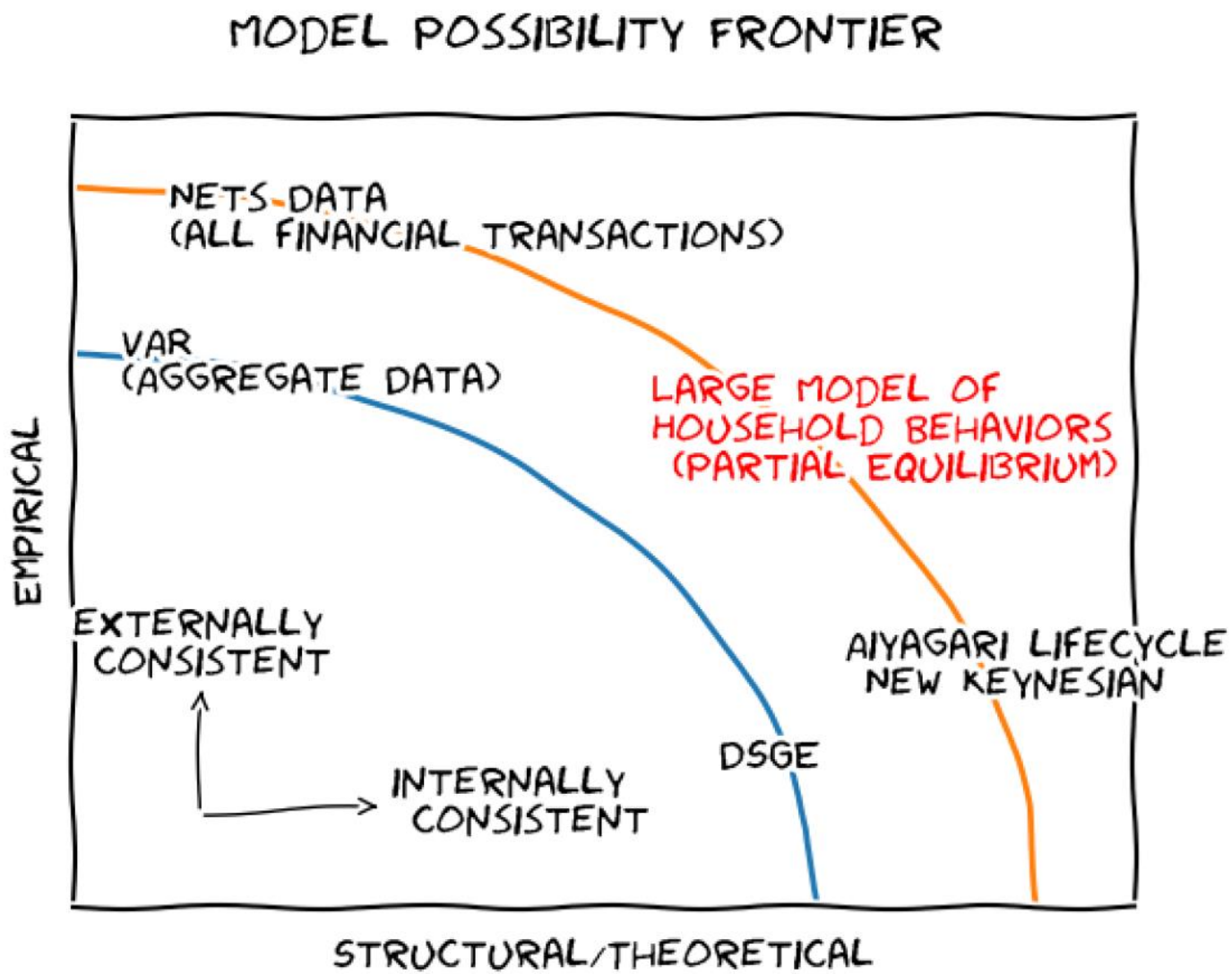
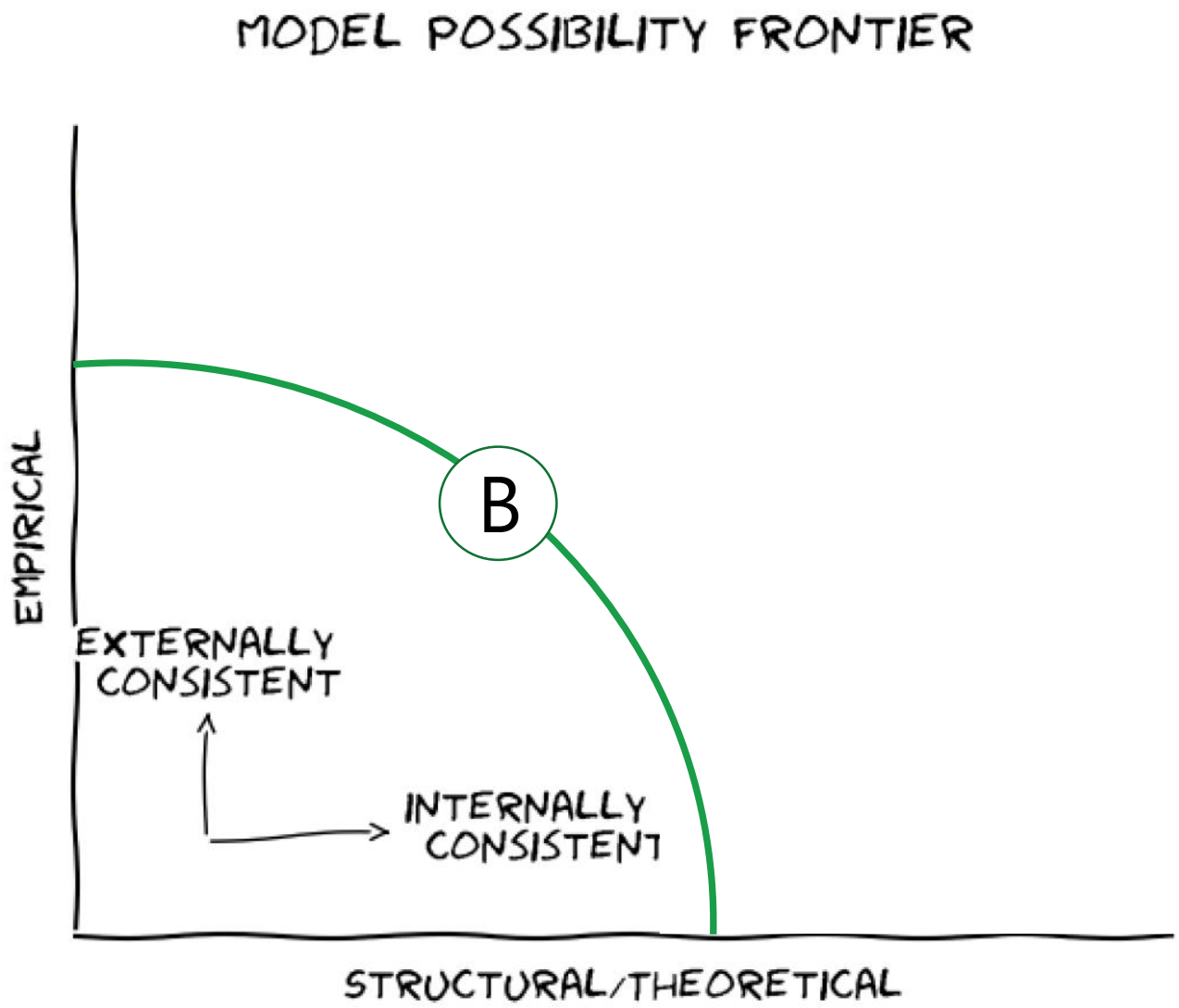
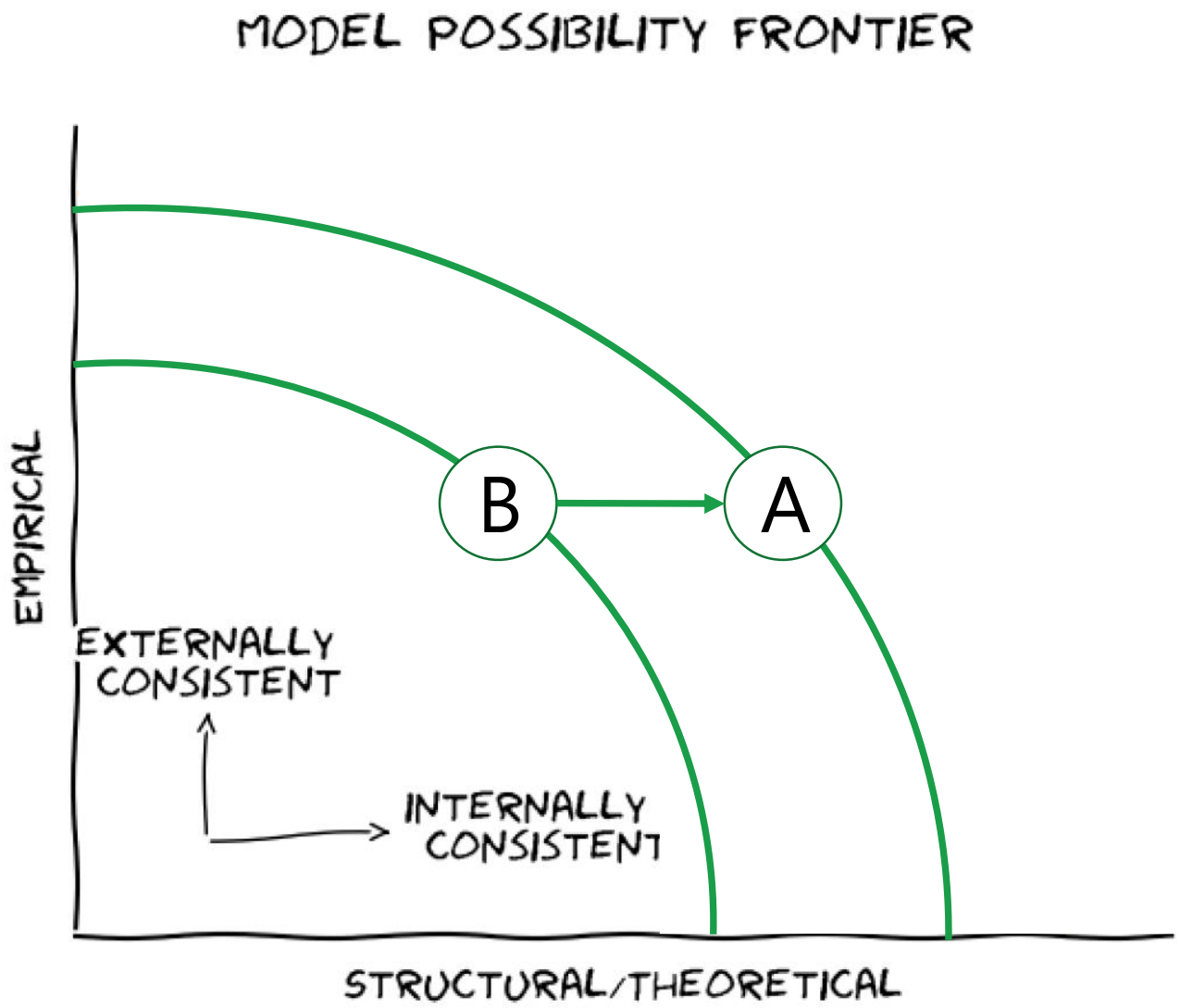


Pagan, A. R. (2003), 'Report on Modelling and Forecasting at the Bank of England', Bank of England Quarterly Bulletin, Spring.


MODEL POSSIBILITY FRONTIER
EMPIRICAL
B
EXTERNALLY CONSISTENT
INTERNALLY CONSISTENT
STRUCTURAL/THEORETICAL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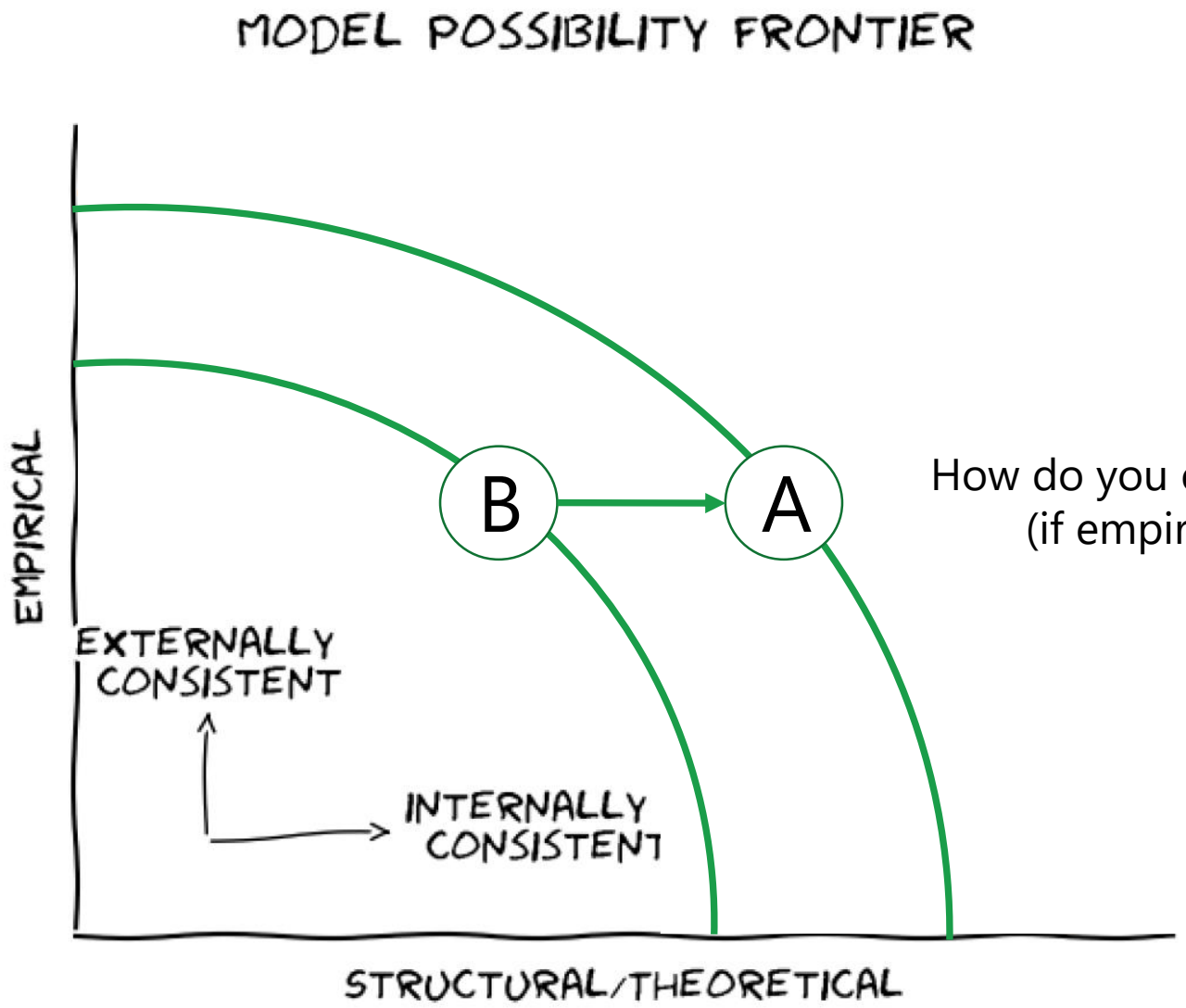
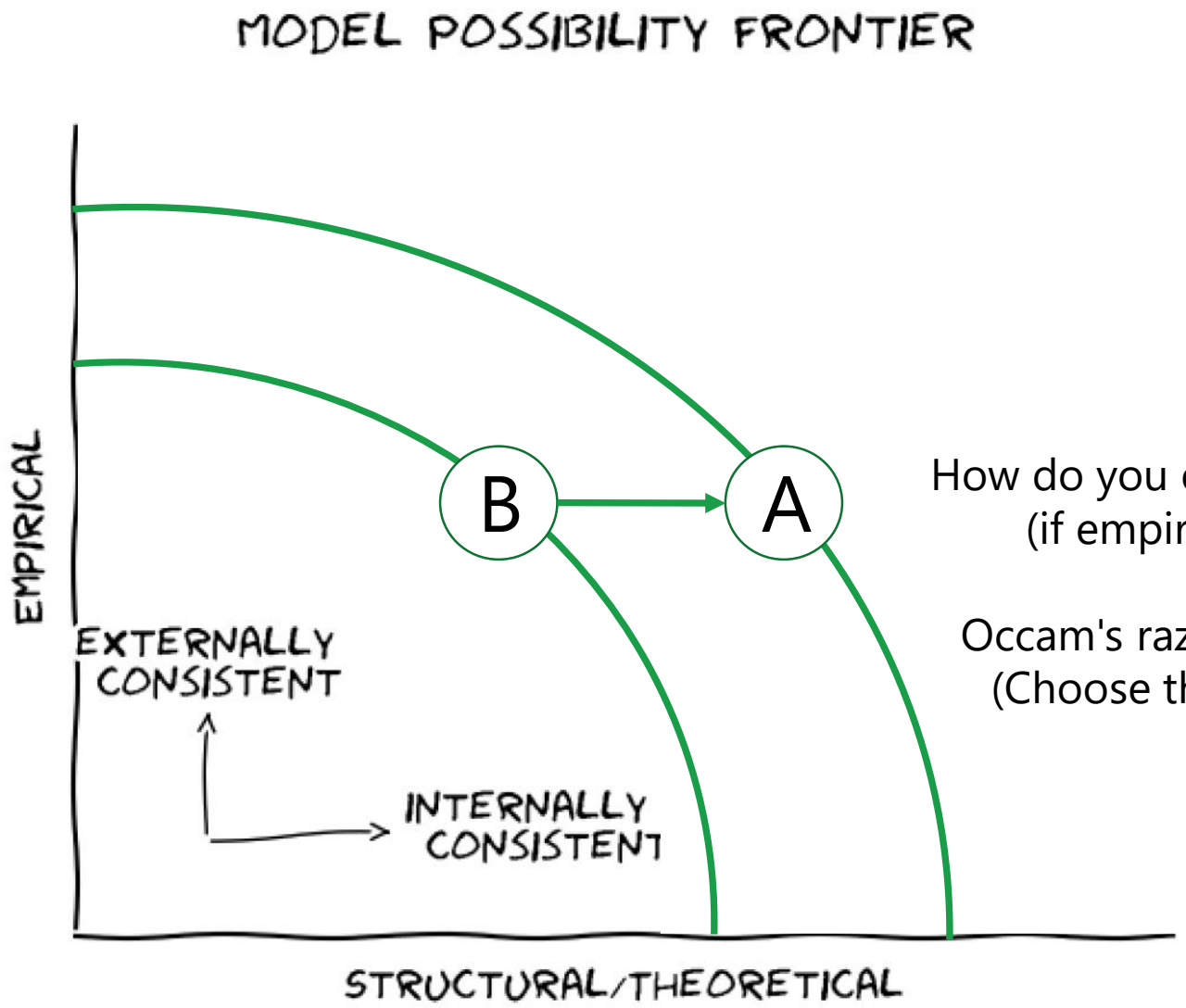
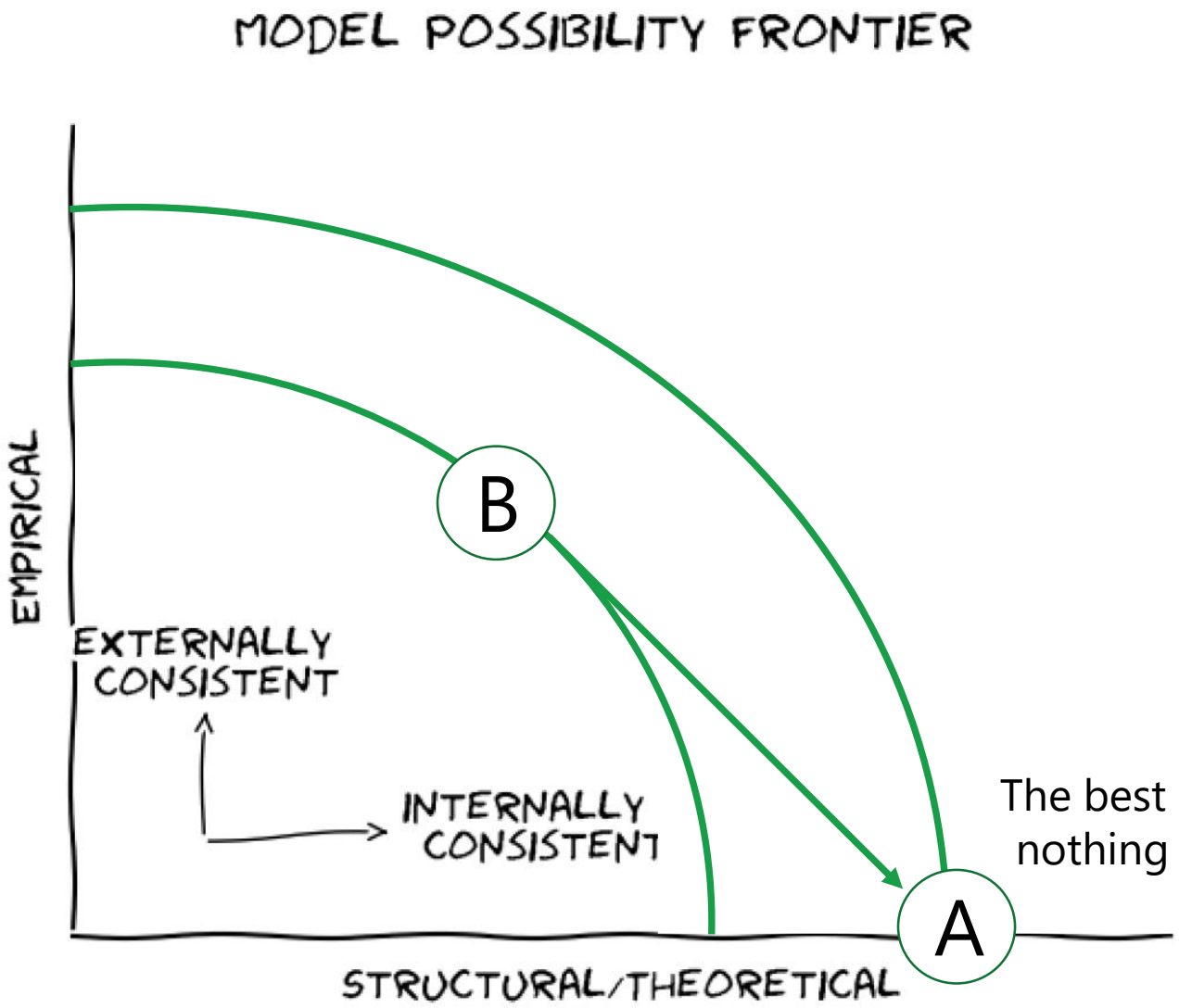


How do you evaluate structural models?
(if empirical fit is not a criteria)



How do you evaluate structural models?
(if empirical fit is not a criteria)

Occam's razor/principle of parsimony?
(Choose the models with the least assumptions)



The best theory in the world says nothing about the real world ….

Most fundamentally, the diagram suggests theory consistency is bound to reduce, rather than improve, empirical coherence and suggests non-evidential preferences could legitimize falsified theory, making macroeconomics in danger of being unscientific, when the 'microfoundations' aim was precisely the opposite. In other words, the trade-off precludes achieving both theory consistency and empirical relevance

Hendry and Muellbauer (2018, p. 304)

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Hendry, D. F., & Muellbauer, J. N. J. (2018). The future of macroeconomics: Macro theory and models at the Bank of England. *Oxford Review of Economic Policy*, *34*(1–2), 287–328.

Which of FIN's models may learn from this project?

Sigrid

Demec

Lotte

Kvarts

Mosart

Snow

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Takk!

ssb.no

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