

Nowcasting Income Inequality in Germany

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1. Motivation

- Household (labor) income distribution shapes business cycle & policy transmission
- Economic crisis → higher volatility of labor income → importance of policy measures
- Lag in availability of micro data (Germany: ca. 16 months)

2. Research aim

Nowcast labor income distribution
→ with macroeconomic indicators
→ in state-of-the-art model

3. Literature contribution

1. Nowcasting inequality (1) in standard macro nowcasting model with readily available data
2. Including micro-data in macro-framework (2)

5. Methodology

- Dynamic Factor Model (3)
→ Two, four, five or six factors;
with & without block structure
- Pseudo-real time estimation
- Generalized Pareto distribution

4. Data

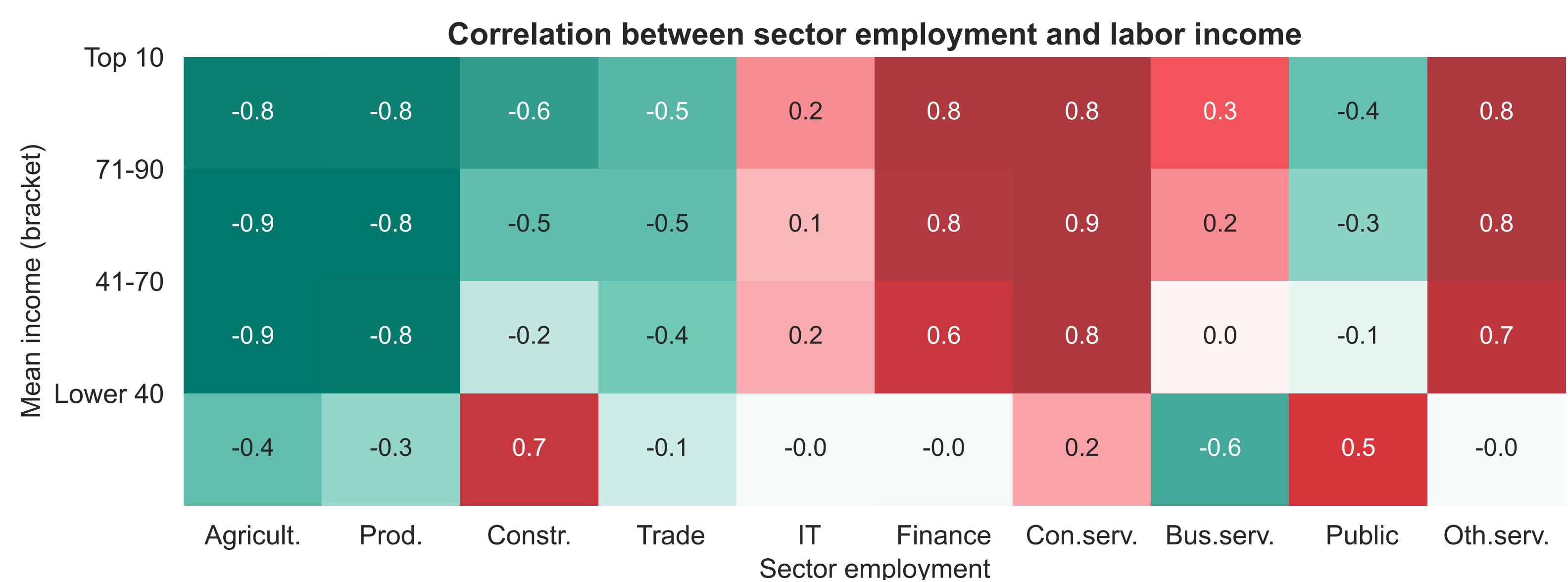
Data

Target: Mean monthly income

- Lower 40 percent
- Middle: 41st–70th / 71st–90th
- Top 10 percent

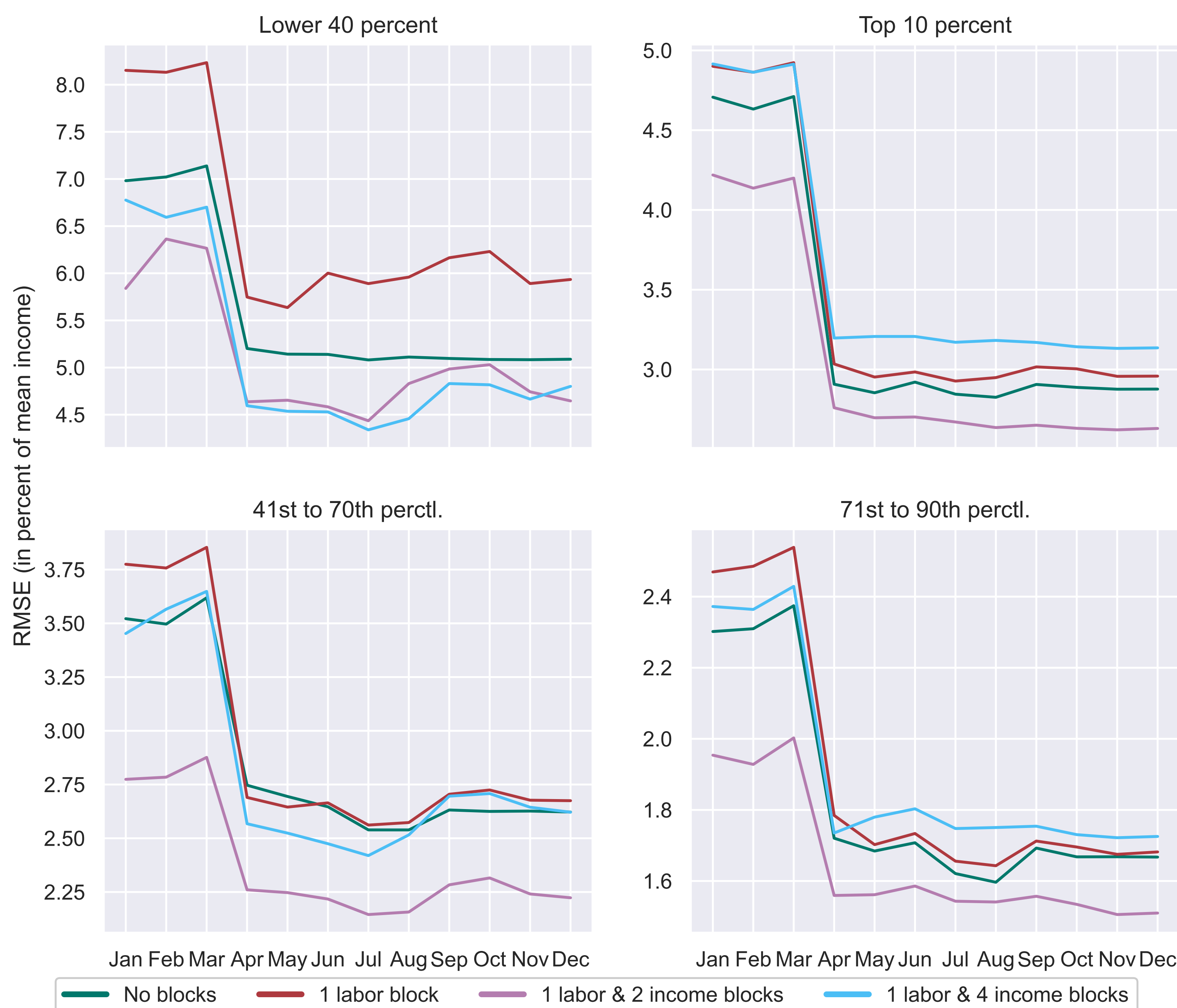
Predictors:

- National accounts data
- High-frequency GDP indicators
- Labor market & sector-specific data

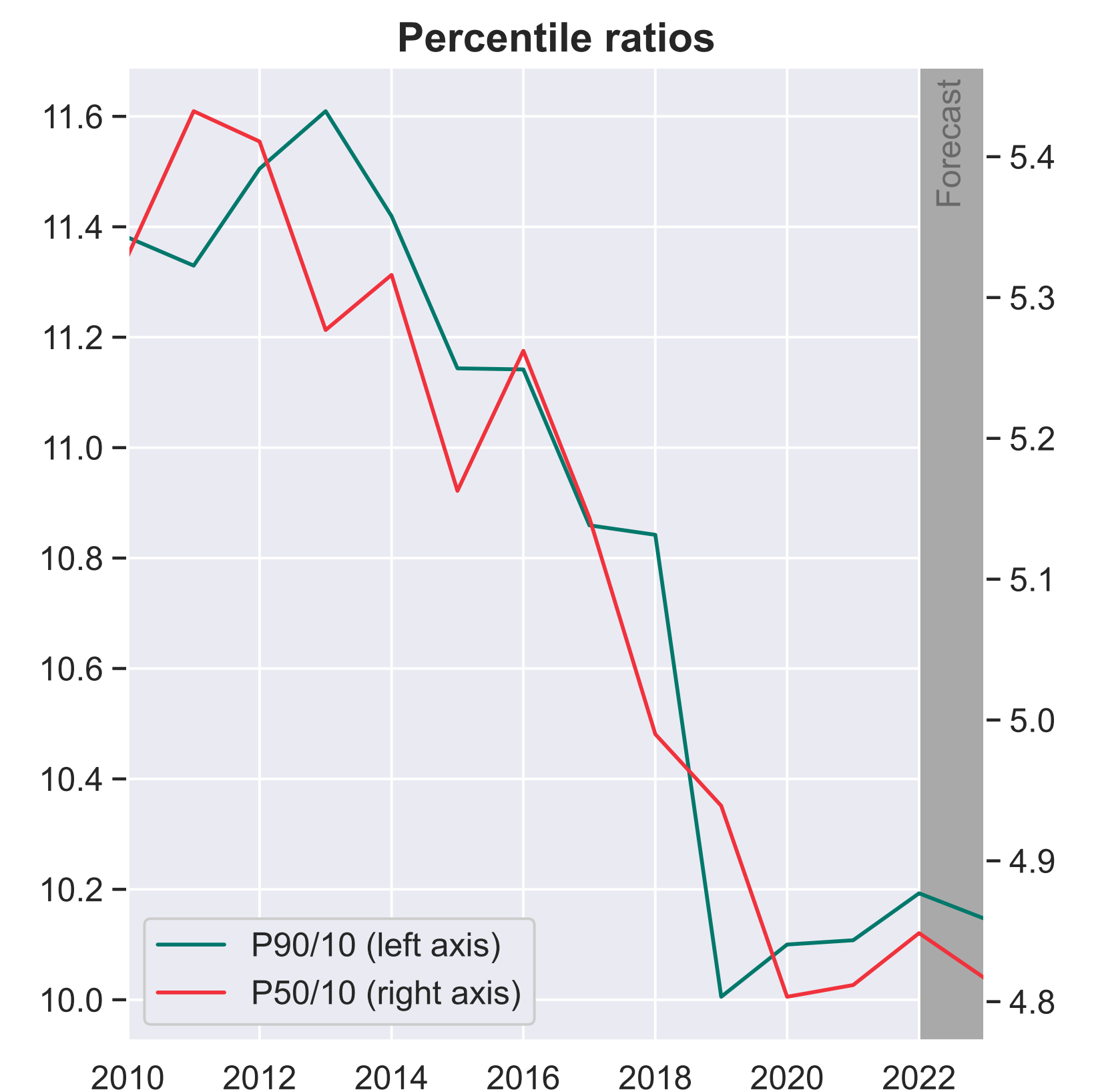


- Frequency: annual, quarterly, monthly
- Real & seasonally adjusted; stationary
- Sources: SOEP, Destatis, OECD, Eurostat, GfK, ifo

6a. Results: Forecast errors (RMSFE)



6b. Nowcast for 2022/23



7. Conclusion

- High-frequency macro data has predictive power for income distribution
- Model performs well at center (& top) of distribution
- Inequality increases after Covid-19 pandemic

References

- (1) Blanchet, T., Saez, E., & Zucman, G. (2022). Real-time inequality. *NBER Working Paper*
- (2) Chang, M., Chen, X., & Schorfheide, F. (2021). Heterogeneity and aggregate fluctuations. *NBER Working Paper*
- (3) Bańbura, M., & Modugno, M. (2014). Maximum likelihood estimation of factor models on datasets with arbitrary pattern of missing data. *Journal of Applied Econometrics*, 29(1), 133–160