

Discussion of Coglianesse, Olsson, Patterson (2021)
"Monetary Policy and the Labor Market:
A Quasi-Experiment in Sweden"

Pascal Paul

November 2021
NBER Monetary Economics

Overview

- ▶ **Goal:** Understand heterogeneous effects of monetary policy
- ▶ **Why do we care?**
 1. Learn how people are differentially affected
 2. Investigate transmission channels & discriminate between different theories
 3. Understand aggregate responses using "bottom-up" approach
- ▶ **This paper:**
 - ▶ Uses detailed employer-employee micro data from [Sweden](#) (1997-2016)
 - ▶ Focuses on labor market (extensive margin: unemployment)
- ▶ **Contributes to young literature using admin data to investigate effects of MP:**

Holm-Paul-Tischbirek (2021), Andersen-Johannesen-Jorgensen-Peydro (2021), Amberg-Jansson-Klein-Picco (2021), Moser-Saidi-Wirth-Wolter (2021), ...

Overview

- ▶ **Goal:** Understand heterogeneous effects of monetary policy
- ▶ **Why do we care?**
 1. Learn how people are differentially affected
 2. Investigate transmission channels & discriminate between different theories
 3. Understand aggregate responses using "bottom-up" approach
- ▶ **This paper:**
 - ▶ Uses detailed employer-employee micro data from [Sweden](#) (1997-2016)
 - ▶ Focuses on labor market (extensive margin: unemployment)
- ▶ **Contributes to young literature using admin data to investigate effects of MP:**

Holm-Paul-Tischbirek (2021), Andersen-Johannesen-Jorgensen-Peydro (2021), Amberg-Jansson-Klein-Picco (2021), Moser-Saidi-Wirth-Wolter (2021), ...

Overview

- ▶ **Goal:** Understand heterogeneous effects of monetary policy
- ▶ **Why do we care?**
 1. Learn how people are differentially affected
 2. Investigate transmission channels & discriminate between different theories
 3. Understand aggregate responses using "bottom-up" approach
- ▶ **This paper:**
 - ▶ Uses detailed employer-employee micro data from [Sweden](#) (1997-2016)
 - ▶ Focuses on labor market (extensive margin: unemployment)
- ▶ **Contributes to young literature using admin data to investigate effects of MP:**

Holm-Paul-Tischbirek (2021), Andersen-Johannesen-Jorgensen-Peydro (2021), Amberg-Jansson-Klein-Picco (2021), Moser-Saidi-Wirth-Wolter (2021), ...

Overview

- ▶ **Goal:** Understand heterogeneous effects of monetary policy
- ▶ **Why do we care?**
 1. Learn how people are differentially affected
 2. Investigate transmission channels & discriminate between different theories
 3. Understand aggregate responses using "bottom-up" approach
- ▶ **This paper:**
 - ▶ Uses detailed employer-employee micro data from [Sweden](#) (1997-2016)
 - ▶ Focuses on labor market (extensive margin: unemployment)
- ▶ **Contributes to young literature using admin data to investigate effects of MP:**

Holm-Paul-Tischbirek (2021), Andersen-Johannesen-Jorgensen-Peydro (2021), Amberg-Jansson-Klein-Picco (2021), Moser-Saidi-Wirth-Wolter (2021), ...

Monetary Policy Identification

- ▶ 2010-2011: Riksbank raises policy rate by 175 bp
- ▶ **Reason:** Committee members concerned about housing market
- ▶ Following Romer & Romer (2004), estimate policy rule

$$\Delta r_m = \alpha + \beta r_m + \sum_{\tau=-1}^2 (\gamma_{\tau} GDP_{m,\tau} + \phi_{\tau} \pi_{m,\tau} + \theta_{\tau} u_{m,\tau}) + \epsilon_m$$

- ▶ Sample: 2002:M3-2010:M2 → typical policy reaction function
- ▶ Estimate shocks for 2010-2011 based on this historical rule
- ▶ Use these shocks in regressions (full sample) → *set all other shocks to zero*
- ▶ **By design:** Large contractionary shock specific to state of business cycle
- ▶ Evidence that sharp tightening fairly unanticipated by forecasters

Monetary Policy Identification

- ▶ 2010-2011: Riksbank raises policy rate by 175 bp
- ▶ **Reason:** Committee members concerned about housing market
- ▶ Following Romer & Romer (2004), estimate policy rule

$$\Delta r_m = \alpha + \beta r_m + \sum_{\tau=-1}^2 (\gamma_{\tau} \text{GDP}_{m,\tau} + \phi_{\tau} \pi_{m,\tau} + \theta_{\tau} u_{m,\tau}) + \epsilon_m$$

- ▶ Sample: **2002:M3-2010:M2** → typical policy reaction function
- ▶ Estimate shocks for 2010-2011 based on this historical rule
- ▶ Use these shocks in regressions (full sample) → *set all other shocks to zero*
- ▶ **By design:** Large contractionary shock specific to state of business cycle
- ▶ Evidence that sharp tightening fairly unanticipated by forecasters

Monetary Policy Identification

- ▶ 2010-2011: Riksbank raises policy rate by 175 bp
- ▶ **Reason:** Committee members concerned about housing market
- ▶ Following Romer & Romer (2004), estimate policy rule

$$\Delta r_m = \alpha + \beta r_m + \sum_{\tau=-1}^2 (\gamma_{\tau} \text{GDP}_{m,\tau} + \phi_{\tau} \pi_{m,\tau} + \theta_{\tau} u_{m,\tau}) + \epsilon_m$$

- ▶ Sample: **2002:M3-2010:M2** → typical policy reaction function
- ▶ Estimate shocks for 2010-2011 based on this historical rule
- ▶ Use these shocks in regressions (full sample) → *set all other shocks to zero*
- ▶ **By design:** Large contractionary shock specific to state of business cycle
- ▶ Evidence that sharp tightening fairly unanticipated by forecasters

Monetary Policy Identification

- ▶ 2010-2011: Riksbank raises policy rate by 175 bp
- ▶ **Reason:** Committee members concerned about housing market
- ▶ Following Romer & Romer (2004), estimate policy rule

$$\Delta r_m = \alpha + \beta r_m + \sum_{\tau=-1}^2 (\gamma_{\tau} \text{GDP}_{m,\tau} + \phi_{\tau} \pi_{m,\tau} + \theta_{\tau} u_{m,\tau}) + \epsilon_m$$

- ▶ Sample: **2002:M3-2010:M2** → typical policy reaction function
- ▶ Estimate shocks for 2010-2011 based on this historical rule
- ▶ Use these shocks in regressions (full sample) → *set all other shocks to zero*
- ▶ **By design:** Large contractionary shock specific to state of business cycle
- ▶ Evidence that sharp tightening fairly unanticipated by forecasters

Results

- ▶ **Aggregate:** textbook macro responses, importantly: $u \uparrow$
 - ▶ interesting: house prices don't respond much
- ▶ **Heterogeneous effects:** stronger $u \uparrow$ -responses for
 - ▶ **workers:** young, low-tenure, low-income
 - ▶ **firms:** small, more short-term debt, more churn
- ▶ broad-based response, not one group drives aggregate reaction
- ▶ **Wage rigidity:**
 - ▶ **workers:** More rigid wage \rightarrow stronger $u \uparrow$ -response
 - ▶ **pass-through:** larger $u \uparrow$ -response for higher short-term debt firms if wages are rigid
 - ▶ **labor market congestion:** stronger $u \uparrow$ -response within sectors with rigid wages

Results

- ▶ **Aggregate:** textbook macro responses, importantly: $u \uparrow$
 - ▶ interesting: house prices don't respond much
- ▶ **Heterogeneous effects:** stronger $u \uparrow$ -responses for
 - ▶ **workers:** young, low-tenure, low-income
 - ▶ **firms:** small, more short-term debt, more churn
- ▶ broad-based response, not one group drives aggregate reaction
- ▶ **Wage rigidity:**
 - ▶ **workers:** More rigid wage \rightarrow stronger $u \uparrow$ -response
 - ▶ **pass-through:** larger $u \uparrow$ -response for higher short-term debt firms if wages are rigid
 - ▶ **labor market congestion:** stronger $u \uparrow$ -response within sectors with rigid wages

Results

- ▶ **Aggregate:** textbook macro responses, importantly: $u \uparrow$
 - ▶ interesting: house prices don't respond much
- ▶ **Heterogeneous effects:** stronger $u \uparrow$ -responses for
 - ▶ **workers:** young, low-tenure, low-income
 - ▶ **firms:** small, more short-term debt, more churn
- ▶ broad-based response, not one group drives aggregate reaction
- ▶ **Wage rigidity:**
 - ▶ **workers:** More rigid wage \rightarrow stronger $u \uparrow$ -response
 - ▶ **pass-through:** larger $u \uparrow$ -response for higher short-term debt firms if wages are rigid
 - ▶ **labor market congestion:** stronger $u \uparrow$ -response within sectors with rigid wages

Comments & Suggestions

Monetary Policy Identification

- ▶ **Short sample for MP-rule:** 2002:M3-2010:M2
 - ▶ Reason: historical central bank forecasts start in 2002:M3
 - ▶ Estimation: 21 observations, 14 regressors, $R^2 = 0.93$
 - ▶ Romer & Romer (2004): 263 observations, 21 regressors, $R^2 = 0.28$
- ▶ **Only two annual shocks** → 300 and 525 bp !
 - ▶ Actual change in rates: 175 bp → rule predicts 650 bp decline in 2010-11 !
 - ▶ Few shocks, only contractionary, could be correlated with other macro shocks
- ▶ **Suggestion #1:** Proxy missing CB forecasts with private ones (Cloyne & Huertgen, 2016)
 - ▶ Holm-Paul-Tischbirek (2021): Consensus Economics → long series for Sweden !
- ▶ **Suggestion #2:** Estimate policy rule for long sample → recover all shocks !
 - ▶ Could account for 2010-11 with time-varying rule responding to HP forecasts

Monetary Policy Identification

- ▶ **Short sample for MP-rule:** 2002:M3-2010:M2
 - ▶ Reason: historical central bank forecasts start in 2002:M3
 - ▶ Estimation: 21 observations, 14 regressors, $R^2 = 0.93$
 - ▶ Romer & Romer (2004): 263 observations, 21 regressors, $R^2 = 0.28$
- ▶ **Only two annual shocks** → 300 and 525 bp !
 - ▶ Actual change in rates: 175 bp → rule predicts 650 bp decline in 2010-11 !
 - ▶ Few shocks, only contractionary, could be correlated with other macro shocks
- ▶ **Suggestion #1:** Proxy missing CB forecasts with private ones (Cloyne & Huertgen, 2016)
 - ▶ Holm-Paul-Tischbirek (2021): Consensus Economics → long series for Sweden !
- ▶ **Suggestion #2:** Estimate policy rule for long sample → recover all shocks !
 - ▶ Could account for 2010-11 with time-varying rule responding to HP forecasts

Monetary Policy Identification

- ▶ **Short sample for MP-rule:** 2002:M3-2010:M2
 - ▶ Reason: historical central bank forecasts start in 2002:M3
 - ▶ Estimation: 21 observations, 14 regressors, $R^2 = 0.93$
 - ▶ Romer & Romer (2004): 263 observations, 21 regressors, $R^2 = 0.28$
- ▶ **Only two annual shocks** → 300 and 525 bp !
 - ▶ Actual change in rates: 175 bp → rule predicts 650 bp decline in 2010-11 !
 - ▶ Few shocks, only contractionary, could be correlated with other macro shocks
- ▶ **Suggestion #1:** Proxy missing CB forecasts with private ones (Cloyne & Huertgen, 2016)
 - ▶ Holm-Paul-Tischbirek (2021): Consensus Economics → long series for Sweden !
- ▶ **Suggestion #2:** Estimate policy rule for long sample → recover all shocks !
 - ▶ Could account for 2010-11 with time-varying rule responding to HP forecasts

Monetary Policy Identification

- ▶ **Short sample for MP-rule:** 2002:M3-2010:M2
 - ▶ Reason: historical central bank forecasts start in 2002:M3
 - ▶ Estimation: 21 observations, 14 regressors, $R^2 = 0.93$
 - ▶ Romer & Romer (2004): 263 observations, 21 regressors, $R^2 = 0.28$
- ▶ **Only two annual shocks** → 300 and 525 bp !
 - ▶ Actual change in rates: 175 bp → rule predicts 650 bp decline in 2010-11 !
 - ▶ Few shocks, only contractionary, could be correlated with other macro shocks
- ▶ **Suggestion #1:** Proxy missing CB forecasts with private ones (Cloyne & Huertgen, 2016)
 - ▶ Holm-Paul-Tischbirek (2021): Consensus Economics → long series for Sweden !
- ▶ **Suggestion #2:** Estimate policy rule for long sample → recover all shocks !
 - ▶ Could account for 2010-11 with time-varying rule responding to HP forecasts

Results

- ▶ Strong focus on unemployment response (extensive margin)
- ▶ **Suggestion #3:** Consider wage responses as well (intensive margin)
 - ▶ Similar result as Guvenen et al. (2017): U-shaped income response ?
 - ▶ Extensive margin at the bottom, intensive margin at the top ?
 - ▶ Maybe even impute consumption (Kolsrud, Landais, Spinnewijn, 2019) !
- ▶ Results on wage rigidities at the sectoral level very interesting !
- ▶ **Suggestion #4:** Potentially focus on regional spillovers. Effects ambiguous ?
 - ▶ More rigid wages → more adjustment through extensive margin
 - ▶ but: intensive margin absorbed by high-income HHs with low MPCs
 - ▶ If regional output ↓: fixed wages privately optimal, but not socially ?

Results

- ▶ Strong focus on unemployment response (extensive margin)
- ▶ **Suggestion #3:** Consider wage responses as well (intensive margin)
 - ▶ Similar result as Guvenen et al. (2017): U-shaped income response ?
 - ▶ Extensive margin at the bottom, intensive margin at the top ?
 - ▶ Maybe even impute consumption (Kolsrud, Landais, Spinnewijn, 2019) !
- ▶ Results on wage rigidities at the sectoral level very interesting !
- ▶ **Suggestion #4:** Potentially focus on regional spillovers. Effects ambiguous ?
 - ▶ More rigid wages → more adjustment through extensive margin
 - ▶ but: intensive margin absorbed by high-income HHs with low MPCs
 - ▶ If regional output ↓: fixed wages privately optimal, but not socially ?

Results

- ▶ Strong focus on unemployment response (extensive margin)
- ▶ **Suggestion #3:** Consider wage responses as well (intensive margin)
 - ▶ Similar result as Guvenen et al. (2017): U-shaped income response ?
 - ▶ Extensive margin at the bottom, intensive margin at the top ?
 - ▶ Maybe even impute consumption (Kolsrud, Landais, Spinnewijn, 2019) !
- ▶ Results on wage rigidities at the sectoral level very interesting !
- ▶ **Suggestion #4:** Potentially focus on regional spillovers. Effects ambiguous ?
 - ▶ More rigid wages → more adjustment through extensive margin
 - ▶ but: intensive margin absorbed by high-income HHs with low MPCs
 - ▶ If regional output ↓: fixed wages privately optimal, but not socially ?

Results

- ▶ Strong focus on unemployment response (extensive margin)
- ▶ **Suggestion #3:** Consider wage responses as well (intensive margin)
 - ▶ Similar result as Guvenen et al. (2017): U-shaped income response ?
 - ▶ Extensive margin at the bottom, intensive margin at the top ?
 - ▶ Maybe even impute consumption (Kolsrud, Landais, Spinnewijn, 2019) !
- ▶ Results on wage rigidities at the sectoral level very interesting !
- ▶ **Suggestion #4:** Potentially focus on regional spillovers. Effects ambiguous ?
 - ▶ More rigid wages → more adjustment through extensive margin
 - ▶ but: intensive margin absorbed by high-income HHs with low MPCs
 - ▶ If regional output ↓: fixed wages privately optimal, but not socially ?

Some (boring) technical points

- ▶ **Suggestion #5:** Use Newey-West & Driscoll-Kraay standard errors instead
 - ▶ (i) Macro data: heteroskedasticity-robust standard errors
 - ▶ (ii) Micro data: two-way clustered standard errors by i & t
 - ▶ Issues: (i) misses autocorrelation, (ii) potentially too conservative
- ▶ **Final Suggestion:** Harmonize various local projections
 - ▶ Simplify controls: lagged changes dep. var. + shocks
 - ▶ Avoid using non-predetermined controls

Some (boring) technical points

- ▶ **Suggestion #5:** Use Newey-West & Driscoll-Kraay standard errors instead
 - ▶ (i) Macro data: heteroskedasticity-robust standard errors
 - ▶ (ii) Micro data: two-way clustered standard errors by i & t
 - ▶ Issues: (i) misses autocorrelation, (ii) potentially too conservative
- ▶ **Final Suggestion:** Harmonize various local projections
 - ▶ Simplify controls: lagged changes dep. var. + shocks
 - ▶ Avoid using non-predetermined controls

Summary

- ▶ Great paper ! Cutting edge empirical macro !
- ▶ Unique tightening shock + detailed micro data
- ▶ **Some suggestions:**
 1. Expand forecasts and MP rule estimation
 2. Provides additional shocks & statistical power
 3. Extend analysis beyond unemployment
 4. Consider regional effects of wage rigidities

Summary

- ▶ Great paper ! Cutting edge empirical macro !
- ▶ Unique tightening shock + detailed micro data
- ▶ **Some suggestions:**
 1. Expand forecasts and MP rule estimation
 2. Provides additional shocks & statistical power
 3. Extend analysis beyond unemployment
 4. Consider regional effects of wage rigidities