Assignment 4 Report

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1 Extension

For this assignment, I extend Table 1 in Hazell et al. (2022) by estimating the slope of the regional Phillips curve with the truncation length $T = 60$, in addition to the original value of $T = 20$. The truncation length appears in Equations (17) and (19) in Hazell et al. (2022), which gives the regression specifications in the study. Theoretically, T should approach infinity since the agent in the model is rational. Therefore, I conduct a robustness check by increasing the truncation length from 20 to 60. Larger values are possible but might not be suitable as we need the data to include the Volcker disinflation period which is in the early part of the data.

$$\pi^N_{it} = \alpha_i + \gamma_t - \kappa \sum_{j=0}^{T} \beta^j u_{i,t+j} - \lambda \sum_{j=0}^{T} \beta^j \hat{p}^N_{i,t+j} + \tilde{\omega}^N_{it} + \eta^N_{it}, \tag{17}$$

$$\pi^N_{it} = \alpha_i + \gamma_t - \psi\, u_{i,t-4} - \delta\, p^N_{i,t-4} + \varepsilon_{it}. \tag{19}$$

2 Result

Table 1: Slope of the Regional Phillips Curve with Extended Results

	No fixed effects (1)	No time effects (2)	Lagged unempl. (3)	Tradeable demand IV (4)
Panel A: Estimates of κ from Equation (17)				
$\kappa(T = 20)$	−0.0037	0.0003	0.0062	0.0062
	(0.0013)	(0.0019)	(0.0028)	(0.0025)
$\kappa(T = 60)$	−0.0022	−0.0025	−0.0840	−0.0033
	(0.0009)	(0.0011)	(0.1220)	(0.0009)
Panel B: Estimates of ψ from Equation (19)				
$\psi(T = 20)$	−0.103	0.017	0.112	0.339
	(0.036)	(0.027)	(0.057)	(0.126)
$\psi(T = 60)$	−0.103	0.017	0.112	0.320
	(0.036)	(0.027)	(0.057)	(0.112)
State effects		✓	✓	✓
Time effects			✓	✓