Who is filling all these vacancies?

Vacancies are filled by new hires. These new hires can come from two pools of labor – employed or non-employed workers. Suppose all quits represent EE (employer-employer) transitions. This in effect implies that the ratio Quits / Hires represent the share of filled vacancies that are attributed to EE transitions.

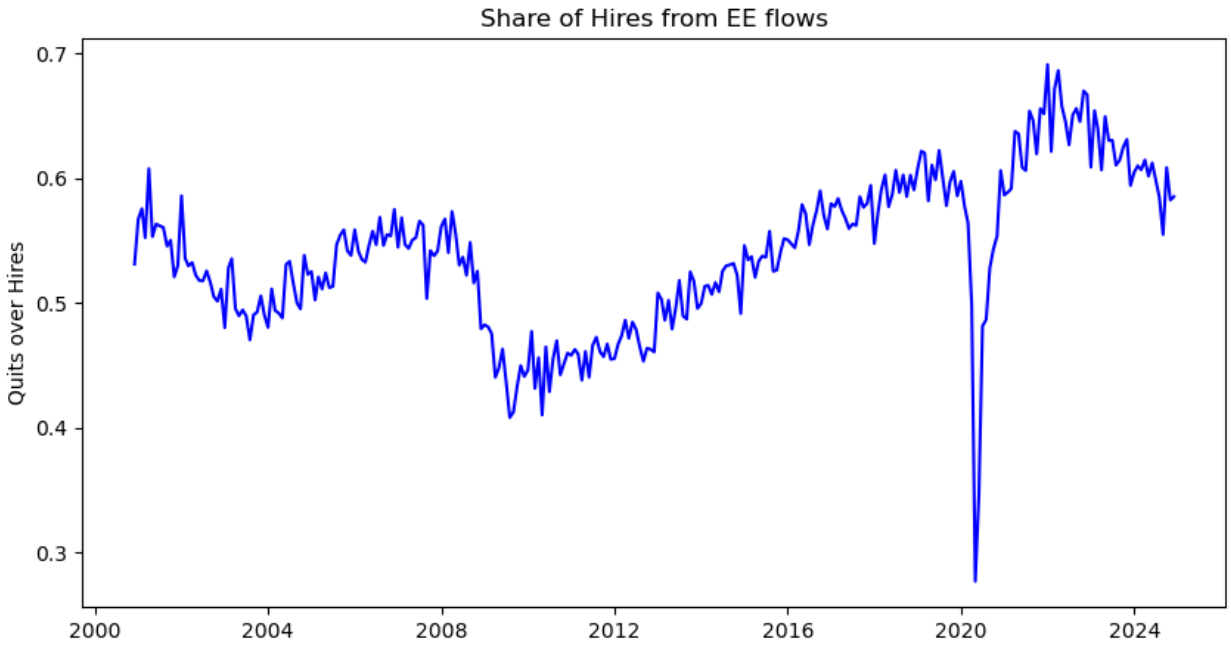


Figure 1: This uses JOLTS data which reports hires and quits in thousands of people.

Alternatively, one can estimate the elasticity of quits to hires to recover the importance of quits in filling vacancies. I estimate the following regression:

$$\log(Quits) = \beta_0 + \beta_1 \log(hires) + \beta_2(\log(hires) * I\{inflation\ period\})$$

Inflation period is defined from April 2021 to May 2023. I run the regression on on JOLTS data from 2000 to may 2023, with excluding data from 2020-March2021. β_1 gives the elasticity in the pre period whereas $\beta_1 + \beta_2$ is the elasticity in the inflation period. Surprisingly, $\beta_1 > 1$ which likely means our assumption that all quits represent EE transitions is likely not true. $\beta_2 > 0$ and statistically significant but quite small.

Table 1: Regression Results

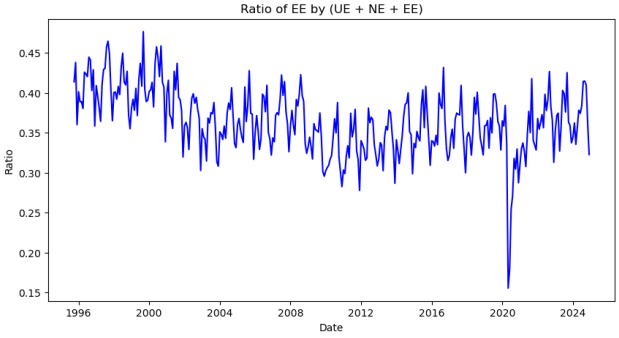
OLS Regression Results

Dep. Variable:	log_quits	R-squared:	0.875
Model:	OLS	Adj. R-squared:	0.874
Method:	Least Squares	F-statistic:	1004.
Date:	Wed, 26 Mar 2025	Prob (F-statistic):	4.95e-130
Time:	11:14:45	Log-Likelihood:	313.88
No. Observations:	289	AIC:	-621.8
Df Residuals:	286	BIC:	-610.8
Df Model:	2		
Covariance Type:	nonrobust		

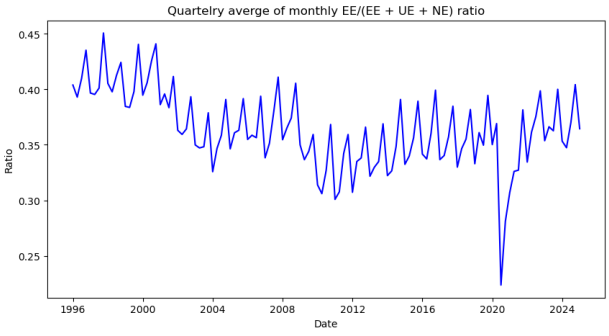
	coef	std err	t	P>|t|	[0.025	0.975]
const	-4.4880	0.356	-12.620	0.000	-5.188	-3.788
log_hires	1.4505	0.042	34.741	0.000	1.368	1.533
log_hires_x_post	0.0114	0.002	6.395	0.000	0.008	0.015

Omnibus:	351.674	Durbin-Watson:	0.891
Prob(Omnibus):	0.000	Jarque-Bera (JB):	29234.141
Skew:	-5.273	Prob(JB):	0.00
Kurtosis:	51.131	Cond. No.	647.

While JOLTS provides flows from the firm's perspective, CPS provides flows from the worker's perspective which allows for direct measurement of EE, UE, NE (out of the labor force to employed) flows. The ratio of EE / (EE + UE + NE) provides information about what share of vacancies filled are due to EE transition. Figure 2 shows the time series for this.



Monthly Frequency



Quarterly Average of the monthly series