

2.2. The Dynamic Labor Demand Model

Empirical Evidence

Another approach, using the FOC of the firm

$$E_t (\beta b L_{t+1} - (\beta b + b + \alpha_1) L_t + b L_{t-1} - (W_t - \alpha_0)) = 0$$

Let Z_t a set of instrumental variables

$$Z_t = \{L_t, L_{t-1}, \dots, L_{t-q}, W_t, W_{t-1}, \dots, W_{t-q}, Cste\}$$

a subset of the information set used by the firm. The FOC can be rewritten

$$E [(\beta b L_{t+1} - (\beta b + b + \alpha_1) L_t + b L_{t-1} - (W_t - \alpha_0)) | Z_t] = 0$$

This suggests that the model's parameters can be estimated using an IV estimator (GMM, Hansen (1982)).

This approach can be generalized to more complex adjustment costs functions.