# Homework 6

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## 1   Entrepreneurs

There is a continuum of entrepreneurs indexed by $j$ with production functions

$$y_{jt} = A_t e^{z_{jt}} k_{jt}^{\theta} l_{jt}^{\nu} \tag{1}$$

$z$ takes two values $z \in \{0.1, 0.2\}$. $A_t$ is aggregate TFP and follows the continuous time equivalent of an AR(1) process. I will abstract from adding subscripts whenever it is obvious.

The law of motion of capital is given by:

$$\dot{k} = \pi - i - \delta k - \frac{\psi}{2} \left( \frac{i}{k} \right)^2 k, \tag{2}$$

where $\pi$ are profits and given by

$$\pi = y - wl - c \tag{3}$$

and investment is given by

$$i = y - c. \tag{4}$$

entrepreneurs