

# ECON 736 Presentation

## Assortative Matching with Large Firms

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November 26, 2021

# Roadmap of Talk

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- Equilibrium

  - Characterization of Equilibrium

  - Assortativity Characterization

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- To simulate the model we will use the following production function:

$$f(x, y, \theta) = \left( \omega_A x^{(1-\sigma_A)/\sigma_A} + (1 - \omega_A) y^{(1-\sigma_A)/\sigma_A} \right)^{\sigma_A/(1-\sigma_A)} \theta^{\omega_B} \quad (1)$$

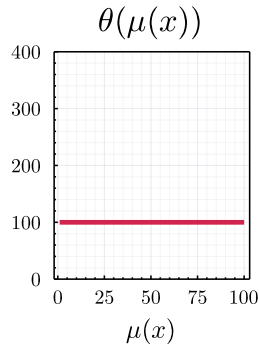
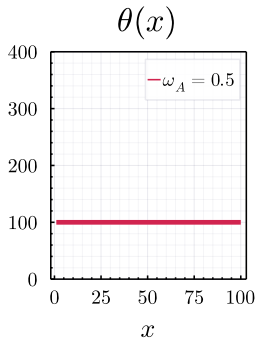
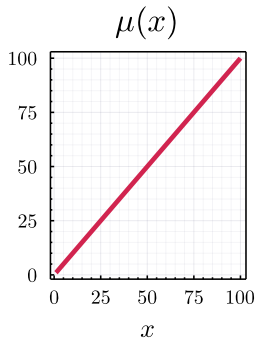
- Computing condition ?? for this production function we get:

$$- \frac{(1 - \sigma_A) (1 - \omega_A) \omega_A x^{\frac{1}{\sigma_A}} y^{\frac{1}{\sigma_A}} \theta^{\omega_B} \left( \omega_A x^{\frac{1}{\sigma_A}-1} + (1 - \omega_A) y^{\frac{1}{\sigma_A}-1} \right)^{\frac{\sigma_A}{1-\sigma_A}}}{\sigma_A \left( \omega_A \left( y x^{\frac{1}{\sigma_A}} - x y^{\frac{1}{\sigma_A}} \right) + x y^{\frac{1}{\sigma_A}} \right)^2} > 0 \quad (2)$$

- Clearly the condition for **PAM** holds if  $\sigma_A < 1$  and we will have **NAM** if  $\sigma_A > 1$ .

## Effect of changing $\omega_A$

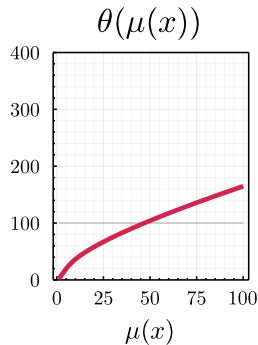
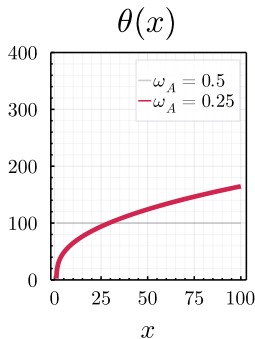
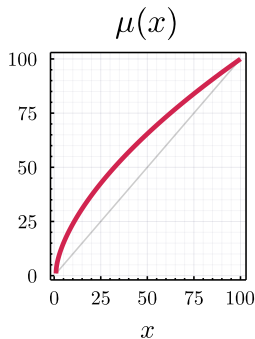
- When  $\omega_A = 0.5$  workers and firms are equally weighted.
- Fully symmetric model, matching  $\mu(x) = x$ , reach constant size



- **Parametrization**  $x, y \sim U[0, 1]$ ,  $\omega_B = 0.5$  and  $\sigma_A = 0.9$

## Effect of changing $\omega_A$

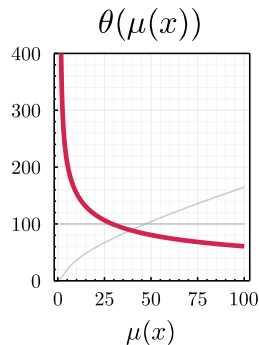
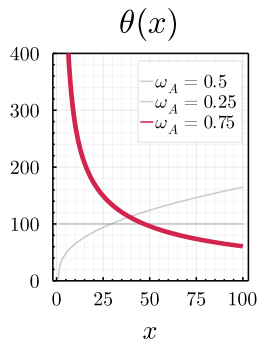
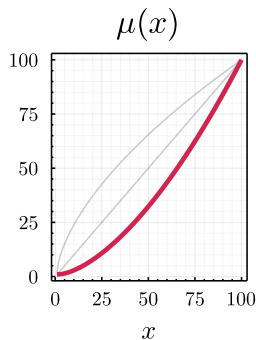
- $\omega_A \in (0.5, 1]$  worker type is more determinant in production.
- The size effect dominates the type effect  $\implies$  matching is concave and firm size is increasing.



- **Parametrization**  $x, y \sim U[0, 1]$ ,  $\omega_B = 0.5$  and  $\sigma_A = 0.9$

## Effect of changing $\omega_A$

- $\omega_A \in [0, 0.5)$  firm type is more determinant in production.
- The type effect dominates the size effect  $\implies$  matching is convex and firm size is decreasing.



- **Parametrization**  $x, y \sim U[0, 1]$ ,  $\omega_B = 0.5$  and  $\sigma_A = 0.9$

- [► Effect in wages](#)



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# Use it to intimidate audiences!

Now you can make it clear you've done a shitload of work  
without having to show everything! [▶ Back](#)

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