

Discussion of  
**A Learning Model of Search and  
Matching**

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# Introduction

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- Why does unemployment and vacancies exist at the same time?
  - Di Tella and Kurlat: It takes times for firms to screen matches

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  - Di Tella and Kurlat: It takes times for firms to screen matches
- Framework: Similar features to Jovanovic (1979,1984); Moscarini (2005)
- This discussion:
  - Draw parallel with Jovanovic
  - Does the predictions of the model survive a small change?

## Jovanovic (1979)

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- Output:  $dX(t) = \mu dt + \sigma dB(t)$
- $\mu \sim N(m, s)$ : match specific; no one knows it; learning based on  $X(t)$
- Zero Entry cost  $\rightarrow$  Pay wage  $w(t) = E[X(t)|\mathcal{F}_t]$
- Workers quit after a sequence of bad realizations; Looks at turnover, tenure and wages.

## Di Tella and Kurlat (2014)

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- Competitive Benchmark
- Three key departures from Jovanovic:
  - Wage is constant
  - Two costs of learning:
    - Cannot produce while learning
    - Have to pay  $c$
- Why would the firm want to learn? wage is constant
- What if firms can pay wage conditional on their beliefs (Jovanovic)?

## Variable Wages

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- Suppose  $\kappa = 0$  (WLOG)
- Suppose  $w_t = w(z_t, t)$ : pay  $c$  only if for some  $z_t, t$ :  
 $zy_H + (1 - z)y_L - w(z_t, t) < 0$
- If  $y_L > 0$ : it is not worth paying the cost  
→ No Unemployment
- Suppose  $y_L < 0$ :
  - Optimal stopping time policies:  $\underline{z} < \bar{z}$
  - wage  $w_T = w(T)$ :  $T$ : time when  $z_t = \bar{z}$
  - Conjecture: wages decline with duration

## Duration and Wages

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- Declining wages with higher duration: due to age-effect, liquidity constraints
- Burdett and Vishwanath (1988): Learning on the worker side → declining reservation wages

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- Implication for unemployment insurance might be different: an increase in benefits increases  $\underline{z}$   
→ efficiency gains from unemployment benefits?



## Conclusion

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- Elegant model of unemployment due to learning by firms
- Why better than other ‘micro-foundation’s? Urn ball model of matching function, Lagos’ location model, etc.
- New channel for the effect of unemployment benefits on duration