

**Discussion of**  
**“Competitive Search Equilibrium with Firms’ Recall”**

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## Objective of the Paper

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- Theoretical: study properties of competitive search equilibrium with recall (and risk aversion).
  - Equilibrium wage contract
  - Efficiency properties of equilibrium
  - Comparison to model without recall
- Applied: investigate impact of risk aversion and unemployment insurance in such a model.

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## Model: Key Elements

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- Directed search model with recall.
- Workers either have job ( $e$ ) or are unemployed but “attached” to a firm ( $u$ ).
- Jobs are either ( $a$ ) active (producing with one worker), ( $i$ ) currently inactive (not producing but with an attached, unemployed worker), or ( $v$ ) vacant.

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## Model: Workers

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- Employed workers consume their wage  $w$  (risk neutral) and make no decision. With exogenous probability  $\lambda$  the match becomes unproductive. Transition into (“attached”) unemployment.
- An unemployed worker decide for which job (wage contract) to search and her search intensity  $s$  at utility cost  $\phi(s)$ .
  - With exogenous probability  $\lambda_R$  she is recalled by her old firm.
  - With probability  $sf(\theta)$  she find a new job, where  $\theta$  is the market tightness in job market in which she searches.

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## Model: Firms

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- Firms post publicly observable wage contracts at cost  $R$  per period. This is their only decision. Find workers with probability  $q(\theta)$ .
- Filled job produces output  $p$ . Match loses productivity with probability  $\lambda$  and regains productivity with probability  $\lambda_R$ .
- Match resolves permanently with probability  $sf(\theta)$ .

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## Model: The Role of Wages

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- Provide the right incentives to apply to new jobs.
- Provide the right incentives to (not) search while unemployed.
- If households are risk-averse: provide consumption insurance.

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## Key Results (Risk Neutrality)

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- With recall ( $\lambda_R > 0$ ) allocation is constrained efficient (maximizes social surplus from additional match) if and only if it is internally efficient (search intensity of unemployed worker maximizes joint surplus of worker and firm).
- Two-tier wage contract  $w_1 < w_2 = p$  achieves internally efficient allocation. Other contracts do, too.
- Compare recall to no-recall scenario:  $s^R < s^{NR}$  and  $\theta^R < \theta^{NR}$  and  $v^R < v^{NR}$ .

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## Key Problems and Results (Risk Aversion) \_\_\_\_\_

- With risk aversion there is a tension for the firm to provide consumption insurance and the right incentives (not to) search for the worker. For insurance  $w_1 = w_2$ . for incentives  $w_1 < w_2$ .
- Unemployment insurance is bad for aggregate output in this case. But: welfare effects?
- With risk neutral workers: unemployment insurance may increase output (but of course has no insurance benefits).



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## General Comments (Highly Subjective)

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- Provide some clear stylized facts that motivate the analysis (e.g. what fraction of new “hires” are recalls, wages of recalls relative to wages of new hires).
- Define notions of efficiency clearly and first characterize efficient allocations before discussing decentralization.
- For decentralization the set of available contracts should not be restricted a priori.

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## More Specific Comments

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- Conditional on having a worker the problem of firm is to not lose her due to too much search.
- Why not pay her through the low-productivity spell (especially with risk aversion)?
- Why not backload compensation by paying  $w_1 = 0$  or even  $w_1 < 0$ ?

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## Putting Things into Context

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- Relationship to dynamic contracts with one-sided limited commitment: want to backload payments to avoid having household default. Here defaulting is searching too much.
- Alvarez and Shimer (2007): distinction between search and rest unemployment. This model has both forms. Unemployed workers that don't search (much) have rest unemployment. Those that actively search have search unemployment. With some heterogeneity among workers/firms can disentangle the two forms.

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## To Summarize

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- Interesting paper for those that work on theoretical labor search models. Main contribution to that literature?
- Could be a paper about a substantive issue (wage dynamics in an employer-worker relationship).
  - Need to give better empirical motivation.
  - Derive the main (and distinguishing) predictions of this model. Show that they do not depend on the particular decentralization. Test them.