LOOKING INTO THE BLACK BOX: A SURVEY OF THE MATCHING FUNCTION

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TOPIC OF RESEARCH SURVERYED

- Survey of the existence and stability of of the aggregate matching function.
- Microfoundations of popular aggregate matching functions, frictions and empirical findings.
- Matching function is a black box
- "Aggregate function" reflecting complicated exchange processes

CONTRIBUTION TO LITERATURE

- Simplest form of matching function $M = m(U, V)$ with elasticity η_U and η_V
- Summarizes the literature that has tried to come up with microfoundations for matching functions as well as other variables that can inflence the matching rates.
- Account of the empirical research that has gone towards the same

MAIN ELEMENTS OF THE ANSWER TO THE RESEARCH QUESTION

- **Mismatch-** degree of heterogeneity in the labor market across skills, sectors and locations(imbalance). If Imbalance and mismatch were zero- perfect matching.
- **Coordination failures-** Urn Ball matching function. Only one worker occupies one job. Uncoordinated applications leads to overcrowding.
  - $M = V(1 - e^{U/V})$.
  - If workers do not know which are firms with vacancies and apply randomly to all firms - $M = V(1 - e^{U/L-N+V})$
  - Not all workers are suitable for vacancies- $M = V(1 - e^{KU/V})$
  - **Search intensity**- $(1 - s)$ fraction of unemployed so not search for a job- $M = V(1 - e^{sU/V})$

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INTERESTING MECHANISM- HOW IS S DETERMINED

- **Reservation wages** - $M = [1 - G(R)]m(U, V)$
- **Ranking -** Long term unemployed workers are disenfranchised and less desirable employees-
  - Short term unemployed - $m^S(U^s, V)$. Long Term unemployed $m^L(U^L, V - M^S)$.
  - Coordination Failure - $M = m(U^s + U^L, V)$.
  - Hazard rates $m^S(U^s, V)/U^S$ and $m(U^s + U^L, V)/U^L - m^S(U^s, V)/U^S$
- **Stock and Flow Matching** Existing old unemployed people only match witch new vacancies. Old vacancies are incompatible - $M = v(1 - \alpha^U) + u(1 - \alpha^V)$
- **Aggregation over Distinct markets** - $M = (U^{-\rho} + V^{-\rho})^{-\frac{1}{\rho}}$

EMPIRICAL METHODS AND FINDINGS

- Empirical properties of matching function is captured by the **Beveridge Curve**.
- All studies establish long run negative relationship between V and U and acknowledge shift variables.
- Country Size does not matter much. growth in Long run unemployment, UI, active labor market policy explains some of the movement
- $ln\left(\frac{M}{U}\right) = \alpha_0 + \alpha_1 ln\left(\frac{U}{V}\right) + trend + lags + structuralvariables$
- $ln(M_t) = \alpha_0 + \alpha_1 lnU_t + \alpha_2 lnV_t + trend$
- Support constant returns to scale matching functions with elasticity about 0.5

LIMITATIONS

- Few rigorous tests of increasing returns to scale.
- No single or combination of variables can account for the deterioration of matching rates.
- Micro Studies not been used in empirical search literature to make inferences about the properties of aggregate matching function.