Aggregate Demand Management in Search Equilibrium

Peter A. Diamond (1982)

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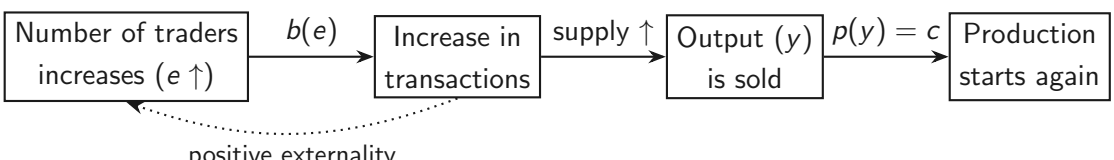
Context

- Theoretical model building on Diamond's previous work using search and matching models.
- The model introduces a new hypothesis, in addition to existing theory that either misperception or lags in price/wage adjustments are the cause of macro-unemployment.
  - The new theory ignores Walrasian auctioneer and introduces trading
  - Departure from RBC theory, such that prices and wages are *fully flexible*, yet not the cause of unemployment
  - Trading process is **exogenous**, specified by a Poisson distribution, with some probability of trading, that is a function of the number of total employed individuals

Trading model

- Costs are also randomly distributed, $c \in G$
- Every project produces that same output, y
- Individuals trade if they have y, they are considered employed
- **Restrictions:** Individuals do not consume their own production and they cannot take on new production with unsold product
- **Driving force of the model:** switching from searching to producing



Question

How do rational expectations steady-state equilibria behave in a barter model, with risk-neutral individuals who trade in stochastic matching process?

Answer - Theoretical results

- Plainly, this model posits that there is **no fixed natural rate of unemployment**, but that it depends on the cost of production $\rightarrow$ multiple steady state equilibria
- There is no (Pareto) efficient equilibria in the interior, and instead only corner solutions produce efficiency
- Movement of the optimal steady-state production decision curve is determined by the equation governing total employment (producers)

$\Rightarrow$ **Trading externality** in the input product market becomes the source of inefficiency in the macroeconomy.

$\Rightarrow$ **Stabilization is needed** Without the government policy, there is too little economic activity. Production subsidies lower the threshold cost and make more projects feasible.

Illustration - Phase diagram of the steady state (dynamic, static)

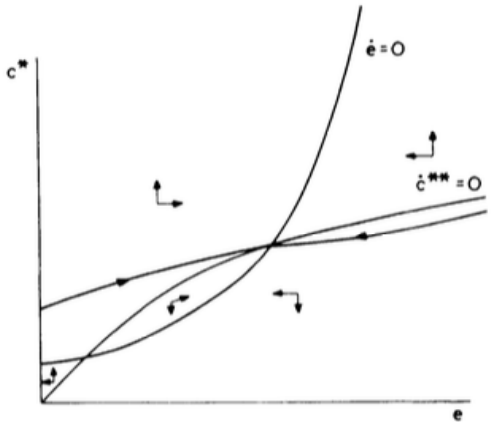


FIG. 2

Contribution to the literature

- **Departure from RBC**: Builds off of identified hypothesis to unemployment issue in macroeconomics, particularly Lucas (1974),
- **Early matching literature**: Morteson (1972, 1982), Pissarides (1979), Heckman (1982)
  - Diamond himself, winning the Nobel in 2010 for this work alongside other early researchers in matching, really pioneered a lot of the research in this field
- **Effects of stabilization policies**: Similarly a departure from work by Lucas, Barro and others that money was *not neutral*

Conclusion

Despite a simulation exercise with a new utility function (to capture welfare from government expenditures) and a production subsidy, the policy conclusions from this model are limited.

- Cannot differentiate the effects of aggregate supply or demand policies, likely not capturing different distortionary effects and different time dependent effects.
- The author offers an extension to see how technological variation would change government policy at different equilibria.
- Interesting result that trading is only impacted by *total employment* (extensive margin) and not the ability of individuals to match (intensive margin)