Modeling Migration Induced Unemployment by P. Michaillat

Discussion by Avi Acharya

Stanford Political Science Department and Hoover

October 30, 2024

The Questions

- How does immigration (an increase in labor supply) affect the employment prospects of natives?
  - How does it affect the profit of firms?
  - How does it affect local welfare?
  - How does it affect politics?

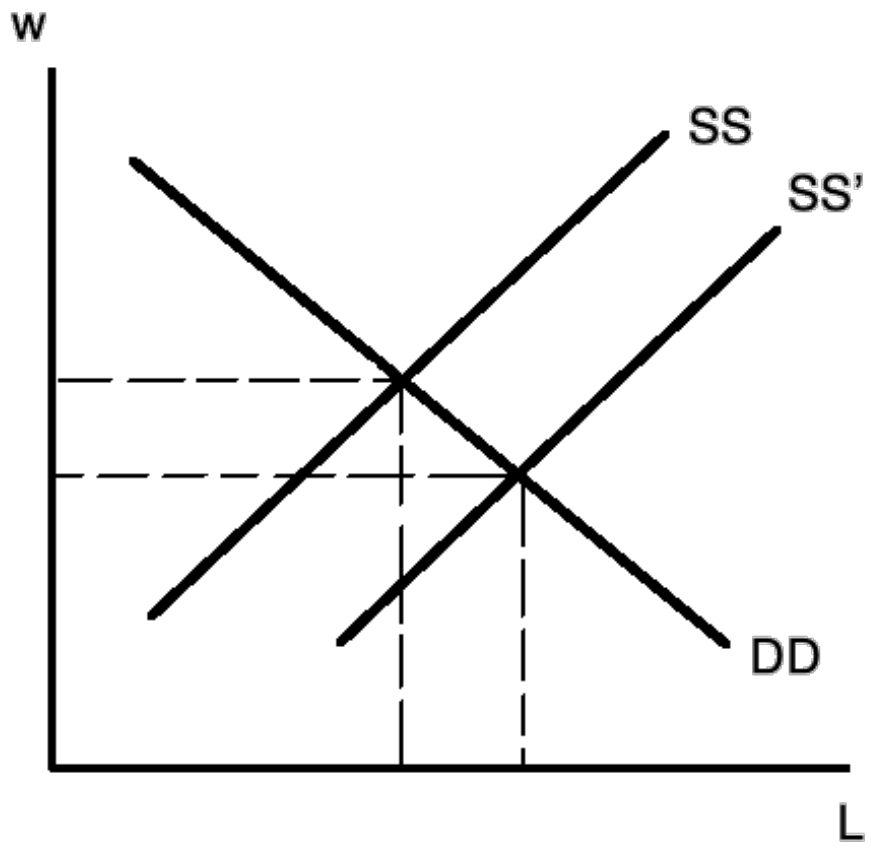
Neoclassical Theory

- Ill equipped to answer these questions because

supply of labor = demand for labor

due to adjustment of wages,

so there is never any involuntary unemployment.



Diamond, Mortensen, Pissarides Model

- Workers occasionally lose their jobs.
- If this happens, they have to search for new jobs, and this search process takes time.
- Firms post vacancies.
- There are some frictions in the re-employment process (modeled in this paper as firms needing to hire recruiters HR to find workers).

- Key mkt clearing variable not wages, but labor market **tightness**:

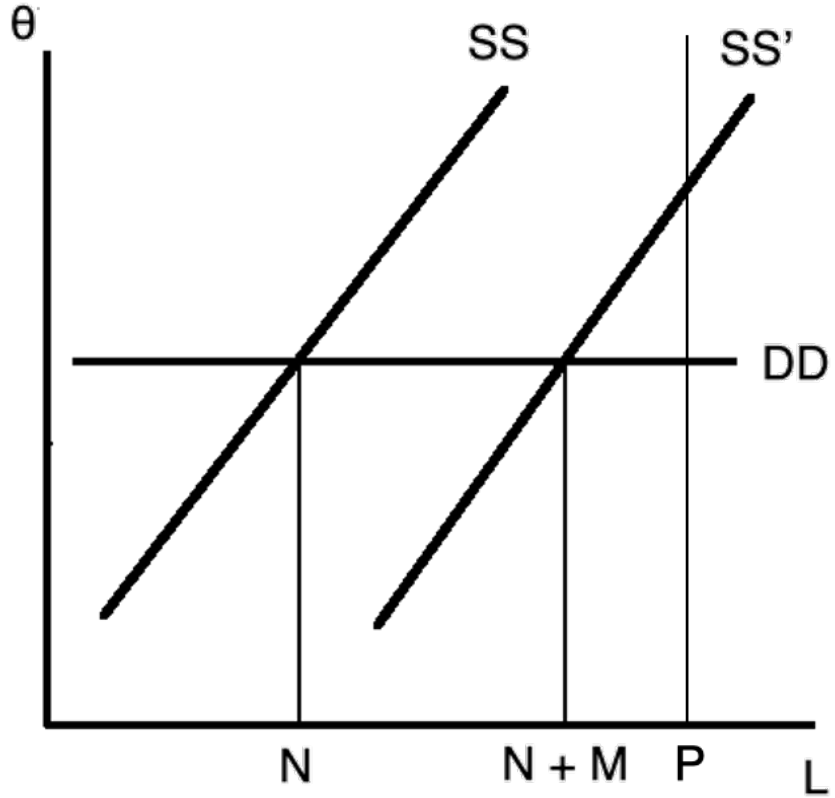
$$\theta = V/U$$

i.e. the steady state ratio of # of vacant jobs to # of unemployed workers (actually not even…).

But the problem with textbook DMP….

- … is that labor demand is full inelastic in tightness (a horizontal line)
- so an increase in labor supply has no effect on tightnes, and therefore no effect on the unemployment of natives!

- P is the original job seeking population.
- N is the number of natives employed.
- P – N is the original level of unemployment.
- M migrants enter shifting labor supply to the right by amount M.
- P - N continues to be the new level of unemployment among natives, same as before.
- All new workers absorbed!



Innovation of this paper

- Recognize that the textbook DMP model is based on the assumptions that marginal productivity of firms in labor is constant (which gives rise to totally elastic labor demand).
- To get away from this, model the marginal productivity of firms as diminishing (which gives rise to a decreasing demand curve in market tightness).
- Use assumption that market friction is based on need to use some labor hours to recruit new workers:

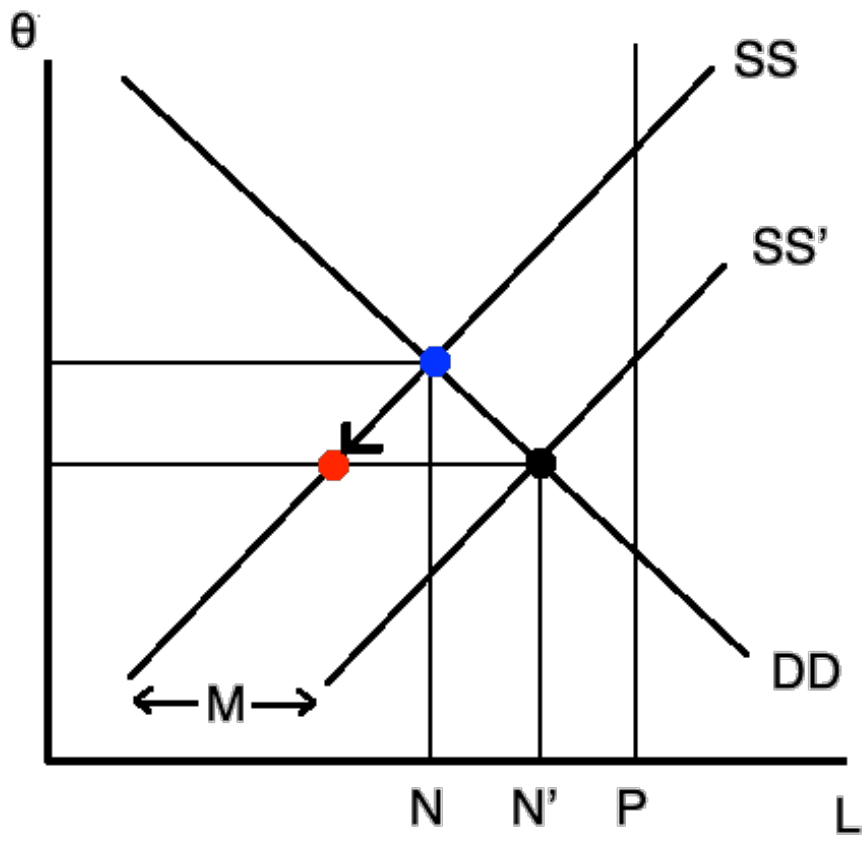
$$\epsilon = -\frac{1-\alpha}{\alpha}\eta\,\tau(\theta)$$

where $1-\alpha$ is the rate at with productivity diminishes, $1-\eta$ is the elasticity of the job finding rate wrt mkt tightness, and $\tau(\theta)$ is the eqlm ratio of recruiters to producers.

- Note without recruiters, i.e. costless matching, $\epsilon = 0$ which means demand is fully inelastic.

Innovation of this paper

- With downward sloping demand curve, eqlm market tightness declines after the influx of M migrants.
- I.e. firms post fewer vacancies per unemployed workers, making it harder to find a job.
- Therefore, unemployment among natives increases.



Tightness is now a “true” mkt clearing variable

- In textbook DMP, θ is not even determined jointly by supply and demand because demand is perfectly elastic.
- I.e. supply is not even necessary to pin down θ.
- With downward sloping demand, θ becomes a “true” market clearing variable.

All other results follow from this basic idea.

- Existing workers do not lose their jobs (they are not laid off at higher rates due to in migration).
- Unemployment is affected only in the increased difficulty (waiting time) of unemployed workers from finding their next job.
- The rise in unemployment due to immigration is greater when productivity is lower.
- Etc.

What can the model not explain? Wages.

- Recall that the wage rate is not an eqlm variable in the DMP model (and not in this variant of DMP); it is exogenous and fixed.

- Market clearing happens via adjustments to tightness. Wages do not respond at all in the model to the influx of workers.

- Section 4.3 of the paper looks at the case where wages respond to the size of the labor force, but this dependency is exogenously set.
- But this is unsatisfying: To truly merge the neoclassical model (paper refers to “Borjasian model”) with the search model would require a market condition to determine wages endogenously.

How to endogenize wages?

- There is only on market clearing equation, labor supply = demand.

- Not possible to identify *two* endogenous quantities (market tightness, and wages) from a *single* equation.
- Other approaches such as Nash Bargaining (between firms and unions) may work but probably more desirable for wages to be determined by market forces as in neoclassical theory.
- Need a **second equation** to fully incorporate neoclassical theory into newer search models.