

Does Search Theory Explain or Describe Unemployment?

Henry Howell

Unemployment has a number of social and economic costs in a country, so economists seek to understand unemployment in the hope of solving or reducing the costs of unemployment. One obvious cost is the loss of production which can be seen in Okun's law, which suggests that for every 1% extra unemployed means a loss of 2% in GDP for an economy. Seen as GDP is a measure of how well a country is doing, unemployment can be seen as reducing it therefore it is important to try to reach full employment by understanding unemployment, and search theory is one possible description or explanation of frictions to help understand unemployment.

In this essay it is my task to assess if search theory does suggest a good explanation or description of unemployment, and in my belief, I think search theory is only a portion of unemployment and describes unemployment but it can't explain it fully.

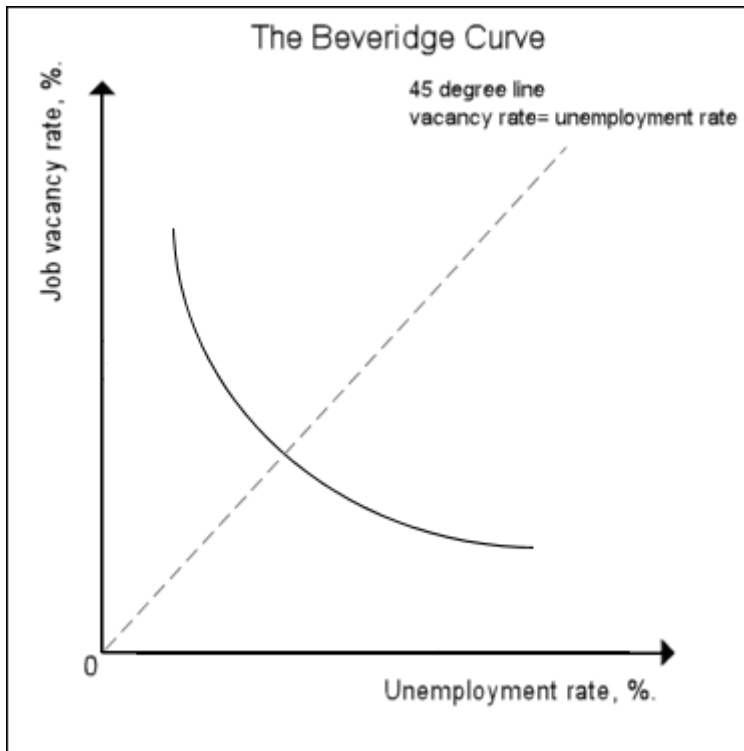
'Frictions' within the labour market are caused by the lack of homogeneity within the labour force stopping the labour market reaching equilibrium quickly due to inefficient allocation of workers to vacancies therefore unemployment is created. So to match a job with right worker becomes costly and search theory is a model for this process.

Search theory gives us a mathematical framework to work with to see how job vacancies are filled with workers. The basic formula is:

$M_t = f(V_t, U_t)$ (current unfilled vacancies, active job seekers)

$M_t = (V_t, U_t)$ matches unfilled vacancies and job seekers in time period t (Joel Clovis, 2010)

Seen as vacancies and job seekers are needed to create jobs then an increase in both would create more matches however the rate at which a job seeker (unemployed) is able to find work decreases as the unemployment pool (number of unemployed) rises. (Positively linked/constant returns to scale). If also we assumed that job destruction = job creation then there would be a constant flow of people in and out of the unemployment pool. However if job destruction remains constant and job creation is smaller than the number of job seekers would increase (more unemployed to fewer jobs). If the opposite happened providing job destruction remained constant then the number of job seekers would decrease therefore there is a negative relationship between the number of vacancies and the unemployment rate. (Cleveland Fed, 2006) This can be represented by the Beveridge curve.

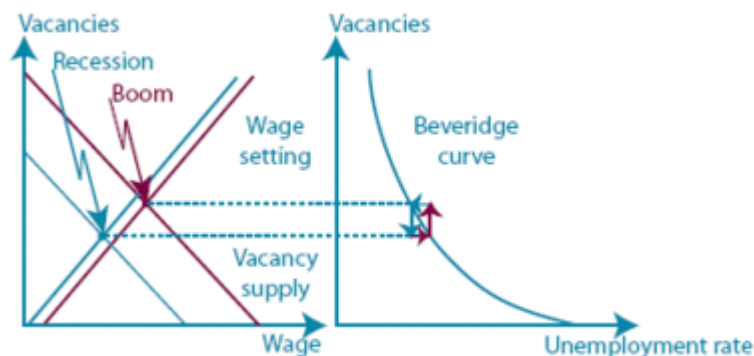


(Figure 1; The Beveridge curve,

2005)

If the Beveridge curve shifts, it shows a changing matching rate in an economy, (outwards shift means more mismatches) and the point on the Beveridge curve shows the relative position an economy is at as it can be seen in this second graph.

FIGURE 3 FLUCTUATIONS OF THE UNEMPLOYMENT RATE



(figure 2; Fluctuations of the

unemployment rate, 2006)

Here unemployment rate and vacancies can be seen to change depending on position in the business cycle (cyclical unemployment), therefore further describing and explaining unemployment.

In the unemployment pool there are two types of unemployed; Involuntary, through no choice of their own and voluntary, those who choose to be unemployment in hope of better job prospects -

these are the job seekers. (Lipsey, Courant, Ragan; 1998) The way a job seeker is tempted out of the pool is if the cost of remaining unemployed is higher than accepting the job, this is linked with wage setting, more specifically reservation wages (the least wage a person is willing to work for), which can change according to how tight the labour market is. A tighter labour market lends itself more to the job seeker as more vacancies are available. Lower unemployment means job seekers are able to have a higher reservation wage, though if there are a low number of vacancies then the amount of job seekers should be reduced due to little chance of getting a match. A firm also will only open a vacancy if the profit is above the cost of searching (recruiting) and the wage given. 'function of the market wage and the recruitment cost' (Cleveland Fed, 2006).

The above theory describes unemployment in good detail but an explanation for the model needs to be further adapted to be able to predict changes in the unemployment rate. To do this the formula has to be altered to account for change over time so new matches have to be added in and the old separations taken away. So if it is said that λ is the separation of one period to the next and employment is (E_t) = labour force – unemployment

Therefore a change in employment can be calculated by $E_{t+1} = f(V_t, U_t) + (1 - \lambda) E_t$ (Joel Clovis, 2010) This can be changed for the unemployment rate by separation flow minus matching flow:
Unemployment rate $t+1 = (1 - \lambda) E_t - f(V_t, U_t)$ (Joel Clovis, 2010)

This gives a model that should be able to predict changes in unemployment through the equation above, including cyclical unemployment and structural not just frictional. It also links in with beverage curve above by predicting the unemployment rate.

Although search theory can provide a description and explanation there are some problems. Search theory assumes a person has to be unemployed to search which causes a problem as if a person has a job and is able to search on the job, there is no reason for the person to leave or reject job offers that earn an income and so a person would work until a better job is found. The Unemployment pool would therefore not have as many people flowing into it through separations as should be seen. (L.H. Summers, 1990). The level on unemployment benefits could be said to affect the length of unemployment however rationally the cost of been unemployed should be higher than that of getting a job to stop benefit reliance therefore not affecting the rationale of the above.

Robert Shimer, an economist, noticed that fluctuations in unemployment along the business cycle seemed to differ from those that search theory predicted. Shimer used empirical data of recent changes in unemployment rates and then compared then with the what the equation of Search theory predicted. Shimer then found that the empirical date fluctuated much more in reality than the

prediction of change. This therefore refutes that the model does predict the amount people searching in unemployment in the business cycle. This reason for this are certain factors that don't quite act as they do according to the model like the labour productivity, job search intensity to name but just two. (*Robert Shimer, 2005*)

To summarise the theory says inflows should exist of unemployed of both the voluntary and involuntary kind, but that in fact voluntary should rationally not exist so the description does not quite stand up to scrutiny. It also shows how the explanation fails to predict due to people searching when not unemployed which could distort predictions of matches as they should be unemployed to search. However in the real world the description not explanation of search unemployment does seem to hold up as there are voluntarily unemployed job seekers maybe due the irrationality of human behaviour in my opinion.

The theory also suggests that a model can be provided that can predict unemployment rate changes, however it does fail in the real world to predict unemployment in a economy therefore as an explanation the theory also does not hold up in all positions. Therefore In my opinion the search theory does work as a good description of unemployment in the real world but it does not totally hold up as an explanation as prediction seems to fail though it is a useful starting point on which to expand upon, it is not a model which should be used to solely predict levels of unemployment.

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