

PROBLEM SET 8

CHP 15 #1

- a) labor force participation rate
=labor force / population
=(employed + unemployed) / population
=(130 million / 260 million) / population
=50%
- b) unemployment rate
=unemployed / labor force
=10 million / 130 million
=7.7%
- c) non-employment rate
= (population - employment) / population
=(260 million – 120 million) / 260 million
=53.8 percent

CHP 15 #3

- a) This statement is false. The data show that total entry into and out of the labor force in any given month is about ten times the number of new entrants and retirees.
- b) This statement is false. The unemployment rate is a stock variable: it does not tell us about flows into and out of unemployment. Even if the unemployment rate remains constant, it is not necessarily the same people who are unemployed each month. In fact, in any given month, 25% of unemployed find a job.
- d) c) This statement is false. As efficiency wage theory suggests, productivity may be positively correlated, and shirking negatively correlated. Thus, though paying a worker more will add to costs, it will also add to revenue. In many cases, maximizing profit will require paying workers more than their reservation wages.

CHP 15 #4

Yes, this is entirely possible. First, if the number of hires exceeds the number of job losers, the unemployment rate could go down. Second, If the number of people leaving the labor force exceeds the number losing their jobs, the unemployment rate could fall.

CHP 15 #5

- a) $W/P = 1/(1+\mu)$
 $P=1.1W$, $W/P = 0.909$

- b) $W/P = 0.909$
 $W/P = 1-u$
Must be satisfied, therefore:
 $u=9.1\%$

- c) $W/P = 0.833$
 $u=16.7\%$

When firms set a higher markup over costs and labor is the only cost, the real wage must fall. We also know that a higher unemployment rate is a requirement for a lower real wage. All together, these relations imply that a greater markup over costs will result in a rise in the natural rate of unemployment.

CHP 16 #1

- a) IS shifts rightward, AD shifts rightward, LM shifts upward
b) LM shifts downward, AD shifts rightward
c) AS shifts upward, LM shifts upward
d) IS shifts leftward, AD shifts leftward, LM shifts downward

CHP 16 #3

The increase in unemployment benefits is an increase in the parameter “z”.

- a) In the long-run, the AS curve will shift up even more, increasing the price level and decreasing the output further, as the economy moves a long the AD curve once again, until the new natural level of output is reached.

In the wage-setting and price-setting diagram the downward sloping wage setting diagram will shift upward, increasing the real wage and increasing the natural rate of unemployment.

- b) In the short-run, the AS curve will shift upward, increasing the price level and decreasing output along the AD curve. The rise in price level will shift the LM curve upward, raising the interest rate along the IS curve as output declines.