The IS-LM-PC Model

Recall from chapters 6 and 8:

\[ Y = C(Y - T) + I(Y, r + x) + G. \]

\[ \pi - \pi^e = -\alpha(u - u_n). \]

Now

\[ u \equiv \frac{U}{L} = \frac{(L - N)}{L} = 1 - \frac{N}{L}. \]

Therefore: \( N = L(1 - u). \) Now, based on the simple production function, \( Y = N, \) we can write,

\[ Y = L(1 - u), \text{ and } Y_n = L(1 - u_n). \]

It then follows that:

\[ Y - Y_n = L((1 - u) - (1 - u_n)) = -L(u - u_n). \]

\( Y - Y_n \) is called the output gap. Substituting from the above into the Phillips curve, we get:

\[ \pi - \pi^e = (\alpha / L)(Y - Y_n). \]