Online Appendix

It is also possible to examine the impact of immigration on wages in the long-run where the price of capital is fixed but the capital stock can change. Taking the natural log of equations (7) and (8) gives:

\[ \ln w = \ln(1 - \alpha) + \eta \ln C + (1 - \eta)[\alpha \ln K + (1 - \alpha) \ln L] - \ln L \]

and

\[ \ln r = \ln(\alpha) + \eta \ln C + (1 - \eta)[\alpha \ln K + (1 - \alpha) \ln L] - \ln K \]

Rearranging the latter equation and differentiating leads to the following immigration-induced change in the capital stock (where it is assumed that in the long-run \( \alpha = 0 \)):

\[ \frac{d \ln K}{d \ln L} = \frac{\eta \phi + (1 - \eta)(1 - \alpha)}{1 - (1 - \eta)\alpha} > 0 \]

Not surprisingly, this term is positive which indicates that as the workforce increases due to immigration, the capital stock will increase as well. With product market neutrality (\( \phi = 1 \)), this equation equals one which indicates that the capital stock will grow at the same rate as the immigration-induced change in labor supply.

Differentiating the \( \ln w \) equation, using the immigration-induced change in the capital stock equation, generates the following long-run relationship between immigration and wages:

\[ \frac{d \ln w}{d \ln L} = \eta \phi + (1 - \eta)\alpha \left[ \frac{\eta \phi + (1 - \eta)(1 - \alpha)}{1 - (1 - \eta)\alpha} \right] + (1 - \eta)(1 - \alpha) - 1 \]
or

\[
\frac{d \ln w}{d \ln L} = \frac{\eta (\varphi - 1)}{1 - (1 - \eta) \alpha}.
\]

With product market neutrality ($\varphi = 1$), this model generates the standard result that immigration has no impact on wages in the long-run. The capital stock increases by the same proportion as the immigration-induced increase in the workforce which leaves the capital to labor ratio constant and thus wages do not change. However, if $\varphi > 1$, then immigration has a positive impact on wages in the long-run and if $\varphi < 1$, then immigration has a negative impact on wages in the long-run.