

Response to referee report (June 10th)

Detailed comments 1, 2, and 4: I don't think that the NK theory necessarily requires that individual variables are stationary¹ but, as the referee points out, log-linearizing is typically done around the steady states of stationary variables. However, the stationarity assumption is not (always) necessary. Log-linearizing can be done around *non-linear* cointegrating relationships, as is done in Altug (1989) and Ireland (2004), and as I discuss on p 6, § 2. As a simple example consider the ratio of real GDP to its lagged value, Y_t/Y_{t-1} . The *log of* Real GDP is typically found to be $I(1)$ implying that Y_t is non-stationary. But this also implies that the non-linear relationship Y_t/Y_{t-1} is stationary, i.e. it is a non-linear cointegration relationship which can be linearized.

Some of the confusion has probably arisen from a mistake in footnote 8 of my paper. In the footnote I assume that the variables C_t , i_t , and P_t are integrated variables (of the different orders given in the footnote). This is erroneous. The correct assumptions are that *the logs* of these variables are integrated.

In response to comments 1, 2, and 4, I have included a reference in the introduction to the discussion on p 6, § 2. I have also corrected the errors in footnote 8.

Detailed comment 3 A stationary error term could be added to account for measurement errors, deviations from linearity *et cetera*. However, I don't think that this adds much to the discussion. I have included a footnote to this effect.

Detailed comment 5 Comment acknowledged. I have moved the footnote to the body text.

Detailed comments 6 and 7 Comment acknowledged. I have changed the discussion of this issue in the paper accordingly. Also, I have also reinterpreted the test of a unit-vector in α for money, as a test of interest-targeting rather than a test of an implication of the NK-model.

¹However, (non-linear) cointegration between the variables of the theory model may be needed in order to ensure that to optimization problems have solutions. Such a discussion is beyond the scope of my paper.

Detailed comment 8 I have added a line to that effect.

References

Altug, S., November 1989. Time-to-Build and Aggregate Fluctuations: Some New Evidence. *International Economic Review* 30 (4), 889–920.

Ireland, P., November 2004. Technology Shocks in the New Keynesian Model. *The Review of Economics and Statistics* 86 (4), 923–936.