
A Hard Look at the New Keynesian Model

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A couple weeks ago, the GEM Blog restated the case that the New Keynesian model, which has dominated the macro academy for decades, is unable to explain most crucial business-cycle facts and is, consequently, stabilization-irrelevant. Given that the focus of that post was the debilitating mainstream preference for market-centric analysis, the critique was baldly limited by available space. What follows adds content to the argument that the longstanding NK model is structurally incapable of providing useful advice to stabilization policymakers.

To get back up to speed, begin with a brief reiteration of Jordi Galí's recent summary of the core NK theory ("The State of New Keynesian Economics: A Partial Assessment", *Journal of Economic Perspectives*, Summer 2018). As noted in the earlier market-centricity post, the ubiquitous model is organized by general market equilibrium enriched by rational market frictions and is captured in three equations. In the first, *nominal output* is determined by expected product-price inflation, the natural rate of interest (the interest rate that would occur if product prices were perfectly flexible), and potential real output (also defined as the hypothetical that would occur if product prices were perfectly flexible). Product prices are prevented from fully adjusting to market conditions by assuming that a randomly rotating portion of firms are arbitrarily unable to change what they charge for goods and services. Background market frictions that loosely link this nominal rigidity to rational behavior are hinted. (Ignore for a bit that there is no way that *rational* market frictions, or rational behavior of any sort, could produce such an arrangement.) Labor prices are assumed to be perfectly flexible.

In the second, *product-price inflation* is determined by expected product-price inflation and the ratio of actual to potential output, generating a small trade-off between output and inflation. In the third, the nominal interest rate is determined by product-price inflation, actual output relative to its trend, and a monetary-policy shift factor that follows "some stochastic process".

The earlier post indicated that the NK model is badly deficient. That was kind. Given the fundamental nature of its obvious problems, incompletely covered two three weeks ago, the New Keynesian "settled" theory is sufficiently out of touch with actual behavior to qualify as dangerous. Recall its central failure: the model's absence of meaningful wage rigidity. That omission was shown to mandate the non-existence of involuntary job loss as well as eliminate Early Keynesian causality from adverse nominal demand disturbances to evidence-consistent movement in employment, output, and income. Recessions without layoffs won't do. Recessions without the central role of total spending won't do. Recessions without their characteristic unemployment persistence after layoffs, which was shown to be largely motivated by MWR-rooted wage rents, won't do. That's a lot of failure, but we have only begun to uncover the reasons to dislike the go-to NK model.

What follows provides quick descriptions of five additional NK model shortcomings. All contribute to the inability of mainstream modeling to align with critical macro evidence. First, the restrictions on rational product-price adjustments to market conditions, which wholly inform the rational nominal-real nexus in NK thinking, are rooted in market frictions that are inherently too small, typically rooted in rational inattention to tiny costs, to support costly recessions. A prime example here is the prominent class of menu-cost rigidities. Menu prices rationally lag market conditions during the period when the corresponding changes are not worth the cost of reprinting the menu. In the first equation, actual nominal GDP is assumed to differ from potential GDP wholly as a result of rational product-price stickiness. The debilitating fact is that NK rational market frictions, impeding product-price adjustment, are simply insufficiently robust to support firm decisions to reduce production and employment, the central events in recessions.

Second, in the nominal-output equation interest rates are clearly the macrodynamic engine of the model's cyclicity. There are no other candidates for the job. It follows that interest rates must be the driving force in investment decisions, which are well known to be at the center of actual instability in highly specialized economies. Practitioners never fail to be surprised at economists' assertion of the centrality of interest rates. In their own experience, the crucial determinant of investment decisions is the expectation of profit. (Here it is necessary to state the obvious; profits and interest rates are not the same thing.) Practitioners are further greatly surprised, and bewildered, that pure profit nowhere appears in the consensus NK model. That outcome is another goofy result of assuming all rational exchange occurs in markets experiencing general equilibrium. The GEM Project's generalized-exchange model, also focusing on rational behavior organized by general (decision-rule) equilibrium, microfounds profit-expectations as the dominant determinant of investment. That innovation is crucially important to policy-relevancy.

Third, the rational-behavior NK model, taken seriously, additionally makes interest rates the principal determinant of nominal consumption. It's always interest rates; there really is no other sufficiently powerful endogenous driver in mainstream market-centric general-equilibrium theory. Practitioners reject the dominance of interest rates as obviously wrong and badly misleading. They instead believe the overwhelming evidence that the chief influence on consumption decisions is household income. Again, the generalized-exchange model comes to the rescue, microfounding the dominant role of income in consumption spending. Indeed, the GEM Project happily revives the general market disequilibrium literature of the late 1960s and 1970s (Clower, Barro, Grossman, Malinvaud, *et al.*) that elegantly modeled the Keynesian causality from income to consumption in the circumstances of meaningful wage rigidity.

Fourth, the second equation consequentially implies that annual nominal wage adjustments for inflation are always informed by employer-employee inflation expectations. Once again, many practitioners demur, asserting instead their use catch-up to inflation that has already occurred. Generalized-exchange modeling microfounds catch-up, demonstrating Lucas's forward-looking approach requires fundamental irrationality. Fifth, and finally, the NK model's message for stabilization authorities is that their only objective must be low, stable price inflation. There is no room in the core theory for any other objective. The evidence, including from the Great Recession, supports a much different, albeit intuitive, approach. Policymakers in 2008-09 rationally focused on the behavior of employment and output, not inflation. Dual stabilization objectives, real and nominal, are microfounded by the GEM Project's generalized-exchange model.

Summing up, the mainstream NK model is plagued with numerous, debilitating problems. It is broadly inconsistent with the most important evidence and laughed at by practitioners. It is stabilization irrelevant, and its policy recommendations are dangerous. It is mind-boggling that mainstream gatekeepers believe the New Keynesian narrative to be settled theory, insisting that research done outside its market-centric boundaries to be a waste of time. How will we allow this naked emperor to continue to parade?

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