

Contributing to Growth Theory

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Date : Jul 12, 2019

The most recurring theme of the GEM Blog has two parts. First, mainstream macroeconomics, rooted in market-centric general equilibrium and therefore unable to accommodate meaningful wage rigidity, cannot be stabilization-relevant. Second, the generalization of rational exchange from the marketplace to information-challenged workplaces paves the way for solving that problem. That cyclical focus, however, is not meant to imply that GEM theory, with microfounded MWR, does not also contribute significantly to growth theory. This post introduces a larger role for the workplace venue in explicating trend macrodynamics. It will be followed by four elaborating posts.

Analytic framework. In most applications, economic growth is most usefully measured by the trend behavior of labor productivity (X/H). By definition:

$$X(t)/H(t) = (E(t)/H(t))(X(t)/E(t)) = \dot{Z}(t)(X(t)/E(t)).$$

X denotes output, H is total labor hours at work, and \bar{E} measures cooperative labor input that is always in 1-1 technical correspondence with X . By definition, $\dot{Z}(t) = \bar{E}(t)/H(t)$. Labor productivity has two distinct components:

- The *technical efficiency of labor* (X/E) is exogenous to LEV decision-rule optimization by workers and is, instead, rooted in capital intensity, input specialization, returns to scale, and broadly defined technical change. Those determinants are familiar from the growth literature that has been accumulating since before Adam Smith.
- The *behavioral efficiency of labor* (\bar{E}/H) results from large-establishment-venue (LEV) rational workplace exchange, simultaneously determined with the wage paid in the optimizing workplace exchange relation (WER) derived in Chapter 2. The \dot{Z} component of productivity has been shown to be influenced by axiomatic preferences, the structure of workplace information, the nature of jobs, and reference-wage. It is the powerful wellspring of continuous-equilibrium nominal wage rigidities, involuntary job loss, and the periodic instability that is so costly in specialized economies. In contrast to its importance to practitioners, \dot{Z} is suppressed in mainstream macro modeling.

The transformation of labor hours (H) into cooperative input (\bar{E}) and the determinants of trend behavior of X/E are elemental economic activity sets that were greatly altered by the Second Industrial Revolution and the advent of large bureaucratic corporations. The four interrelated essays that follow build on that that fundamental change in the global production landscape.

Forthcoming posts. Next week will take a close look at Sir Arthur Lewis's two-sector growth model, which many development specialists believe has been, since its inception, our most powerful description of the transition from low-income, low-specialization economies to high-income, high-specialization economies. The great contribution of the GEM model with respect to Sir Arthur's seminal work is the generalization of his analysis of highly-specialized economies' macrodynamics.

The next week conducts a similar exercise for the famous Solow neoclassical growth model. Again, the generalization of rational exchange from the marketplace to information-challenged workplaces significantly generalizes Bob Solow's macrodynamics to include cyclical as well as trend analysis. The more powerful synthesis is achieved without compromising the neoclassical underpinnings of the original formulation.

Week three takes on a really important issue that mainstream macro theorists failed to adequately confront when it arose a quarter of a century ago, i.e., Real Business Cycle (RBC) theorists' misuse of the Solow residual. (The residual is obtained by regressing real labor productivity on measures of labor and capital input.) Solow assumed his residual measured technical progress. RBC theorists observed that the Solow residual cycles over time and concluded that it supports their model of instability absent money. The GEM Project's generalization of the neoclassical growth model easily demonstrates the RBC fraudulent use of the Solow residual. The analysis is so obvious that the badly mislead nature of the interpretations it yielded must be deliberate.

Week four briefly summarizes Mancur Olson's rent-seeking growth theory and William Baumol's Schumpeterian

macrodynamic model. That both valuable analyses ignored today results from their being beyond the reach of market-centric general-equilibrium theory. It is good news that both are easily accommodated in the more rigorous GEM framework. Olson's contribution is especially insightful. Its absence from the macro reading lists and publications is shameful.

Message. The fundamental message of this survey of growth theories is the versatility of the generalized-exchange model class. It powerfully describes both cyclical and trend macrodynamics. Mainstream market-centric modeling doesn't come close to its explanatory power.

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