Thinking about Efficiency

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The core concept in the GEM Project is economic efficiency. Throughout the history of the profession, economists have agreed on the centrality of efficiency. From the beginning: “Adam Smith’s main concern was how and why economies grew. His answer was that capitalism frees the entrepreneurial spirit, and that given incentives entrepreneurs would figure out how to produce goods more efficiently. As a result of greater productive efficiency, economies would grow and prosper, raising the standard of living for most people in the nation.” (Pressman, 2006, p. xv)

Economic efficiency is defined as getting more output out of a given supply of resources. It is nearly identical to productivity. Efficiency has two broad applications. *Allocative efficiency* has to do with the most productive use of scarce resources among competing alternatives and has long focused on the effectiveness of markets in achieving that end. Relevant adjustments go well beyond fine-tuning. Sir Arthur Lewis constructed his powerful growth theory on the efficient reallocation of labor from low-productivity farming to higher-productivity jobs in manufacturing.

Productive efficiency results from altering production itself in order to yield greater output from given inputs. The process of technical change, big or small, is what Adam Smith, had in mind. The distinction between allocative and productive efficiency boils down to the former moving scarce resources to more productive uses while the other latter creates more productive uses,

Efficiency is a very big deal and, here’s my point, only part of its familiar dynamics – the allocative part – are governed by the marketplace. The take-away, which cannot be surprising, is that market-centric macro theory badly suppresses theorists’ capacity to accommodate the causes and consequences of productive efficiency. It is not a stretch to conclude that mainstream market-centric general-equilibrium theorists have been, in effect, conducting a foolhardy experiment on model-building largely absent productive efficiency, dooming their aspirations to be stabilization-relevant. The remainder of this post illustrates my argument with two powerful examples.

<u>Second Industrial Revolution</u>

Michael Mandelbaum (2002, p.277) once described the Industrial Revolution as “the most influential development in human history since the invention of agriculture ten thousand years ago”. Scholars have divided that fundamental transformation into two parts. The first began toward the end of the 18^{th} century and was rooted in the invention of machines driven by steam. The next part, unsurprisingly named the Second Industrial Revolution (SIR), began in the latter half of the 19^{th} century and is best captured in Alfred Chandler’s (1977, 1992, 1996) insightful analysis. He describes how global trend productivity growth broke out of subsistence levels as a result of specialization-based increasing returns associated with the spread of large, hierarchical firms, beginning in North America and Europe.

The organization of that now-ubiquitous class of enterprises was triggered by the development of railroad, steamship, telegraph and cable systems which decreased delivery times and uncertainties for large flows of goods through national and international economies. SIR refers the wave of relatively uncomplex technological innovations that exploited the potential for high-volume, high-speed production. From Chandler *et al.* (1997, pp.12-13, italics added): “Entrepreneurs and firms in these nations [United States, Britain, Germany] pioneered in the commercialization of new capital-intensive technologies by making the investments and creating the *new corporate forms* required to fully exploit their profit-making potential.” Chandler points out that, as late as 1840, there were no middle managers in the United States.

Particularly relevant to the GEM Project, the new corporate forms were needed to deal with the new complex workplaces that are inherently restricted by costly asymmetric employer-employee information. Economists have long known such restrictions prevent efficient wage setting in the labor market. Management had to rationally relocate wage determination inside the firm and get to work on identifying the true nature of employee preferences. Such knowledge is needed to answer a fundamental personnel-policy question in highly specialized firms: How to convince employees to voluntary accept employer goals?

Meanwhile, ignoring the Second Industrial Revolution, market-centric macroeconomics continued to assume that firms are sufficiently uncomplex to support cost-effective direct supervision of worker on-the-job behavior. That convenient specification, suppressing information-challenged workplaces, is a necessary condition of market-centricity. The outcome is unrecognizable economic landscapes and badly off-base conclusions. Stabilization-relevant macro theory is not possible in economies restricted to uncomplex firms.

Meaningful Wage Rigidity

Information-challenged workplaces have always been the key to solving the keystone Keynesian macro question. How to make MWR, defined by its capacity to rationally suppress nominal wage recontracting, consistent with optimization and equilibrium, the two fundamental tenets of economic theory? It is extraordinarily good news that the GEM Project has answered that question by modeling rational price-mediated exchange in workplaces inherently restricted by costly, asymmetric information, establishing the link to the new corporate forms that enabled the Second Industrial Revolution. Within that ubiquitous class of modern bureaucratic enterprises, the Project has demonstrated that MWR is mandated by productive efficiency, which in this case trumps market allocative efficiency. That is why it is typically called the efficiency wage. (See Chapters 3 and 4 in the Website's e-book.) The Project has finally made decision-rule optimization and equilibrium consistent with the critical evidence, enabling stabilization-relevant macroeconomics.

The evidence that is central to understanding instability, while identified by Early Keynesians, is downplayed by New Keynesians. Their embarrassing behavior is required as part of their all-in Ptolemaic defense of the mainstream market-centric macro model class. NK theorists pay a heavy price, most notably being forced to ignore MWR and its unique capacity to motivate rational causation from nominal demand disturbances to involuntary job loss and evidence-consistent movement in employment, output, and income. In an egregious example, there is no mention of forced layoffs in the 2016 *Handbook of Macroeconomics*, the task of which is to summarized the state of modern macro thinking. Absent MWR enrichment of the nominal-to-real nexus at the core of macroeconomics, mainstream theory cannot be stabilization-relevant.

Final Point

Here is an underappreciated, albeit critical, final point. The Project's efficiency-wage theory is uniquely consistent with what practitioners' tell us about wage determination. *The GEM narrative is the way labor is actually priced in ubiquitous information-challenged workplaces. Meaningful wage rigidity is a matter of productive efficiency.* The evidence is overwhelming. In one particularly interesting example, Truman Bewley (1999a) conducted a careful survey in the U.S. during a period that includes the 1990-91 recession, asking 104 business leaders why nominal wages are downward rigid. From Bewley (1999b, p.1): "Employers were reluctant to cut pay because they believed doing so would hurt employee morale, leading to lower productivity and current or future difficulties with hiring and retention. It was thought that these effects would in the end cost more than the savings from lower pay." Bewley also asked 62 firms that had recently laid-off employees whether the workers had been offered a choice between losing their job or accepting a wage cut. None had offered the choice. (For more on the relevant evidence, see next week's blog.)

The Project's efficiency-wage story is much more than just another theory. It is, simply put, the only real-world answer to the keystone Keynesian question about rationally motivating meaningful wage rigidity. Given that pedigree, wouldn't it be smart for macro gatekeepers to reconsider their insistence on confining rational exchange to the marketplace? Wouldn't it be smart to become proactive in restoring the profession's capacity to give useful advice to stabilization authorities, avoiding future embarrassing policymaker complaints about mainstream uselessness of the sort that punctuated the 2007-09 Great Recession? Isn't time to get smart?

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