

# Ronald Coase

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**Date :** May 25, 2018

Ronald Coase, a 20<sup>th</sup>-century economic theorist, is the intellectual Godfather of generalized-exchange macroeconomics. The opening passage of his 1981 Nobel Lecture could be used to introduce the GEM Project: “My contribution to economics has been to urge the inclusion in our analysis of features of the economic system so obvious that, like the postman in G.K. Chesterton’s Father Brown tale, *The Invisible Man*, they have tended to be overlooked. Nonetheless, once included in the analysis, they will, as I believe, bring about a complete change in the structure of economic theory, at least in what is called price theory.... What I have done is to show the importance for the working of the economic system of what may be termed the institutional structure of production.”

The GEM Project continues the exploration of the institutional structure of production. It differs from Coase and his New Institutional followers by focusing on microfounding meaningful wage rigidity and working through its implications for macroeconomics. Composed of downward nominal inflexibility over the stationary business cycle and chronic time-varying labor rents, MWR turns out to be the most powerful change agent to come out of the Coasian tradition. It uniquely enables macro theory to be simultaneously micro-coherent and stabilization-relevant while fundamentally reconstructing labor-market microeconomics.

The GEM Project suppresses wage recontracting by modeling rational employer-employee exchange in large, highly specialized workplaces that are inherently restricted by costly, asymmetric information and routinized jobs. In such workplaces labor input ( $E$ ), demonstrating 1:1 correspondence with production, is distinct from labor hours ( $H$ ) and cannot be measured or priced in the marketplace. Profit-seeking management must construct its own wage-setting apparatus. Moreover, reflecting the evolution of best-practices human-resource systems over time, management relatively quickly learned that employees strongly prefer equitable treatment. That preference, significantly influencing on-the-job behavior, must be carefully factored into rational labor pricing.

Large-establishment management of labor separates into two parts, The crucial step is sufficient identification of the firm’s Workplace Exchange Relation (WER) to enable labor pricing consistent with unit-cost-minimizing employee behavior:  $W=W^n=\max(\dot{Z}/W)$  and  $\dot{Z}=\dot{Z}^n=(E/H)^n$ . The GEM Project derives the relevant nonconvex WER, establishing the equality of the wage paid ( $W$ ), the employer’s efficiency wage ( $W^n$ ), and the employees’ reference wage ( $W^n$ ) at the unit-cost-minimizing WER discontinuity:  $W=W^n=\max(\dot{Z}/W)=W^n=\sup \mathbf{K} > W^m$  where  $\mathbf{K}$  denotes employee equity-based reference standards and  $W^m$  is the market rate. Keynes’s Second Classical Postulate is scrapped and replaced by employees’ optimization of labor’s cooperative productivity ( $\dot{Z}=E/H$ ), practitioner-recognized behavior that generates both chronic labor rents and significant downward nominal wage rigidity.

The second step is to assure an adequate workforce, a task that is relatively easy. Continuous-equilibrium labor pricing ( $W=W^n=W^r > W^m$ ) combines with the huge pool of small-firm workers being paid the market wage to produce an elastic market-supply schedule at  $W^n$ . The large-establishment production schedule (with particular levels of labor hours, capital services, and material input) is increasing in management’s rational expectations of product demand. The reconstructed labor demand is consistent with the GEM Project’s reorientation of coherent macro theory around Keynesian causation from nominal demand to employment and output.

The generalized-exchange MWR story, down to its details but absent the math, has been told for much of the past hundred years in numerous best-practices business texts. Despite its obvious power, economic theorists longstanding inability to derive MWR from axiomatic model primitives has caused the concept to be avoided in modern mainstream teaching and research. Given the advances made in the GEM Project, MWR can now be returned to its early Keynesian keystone role in macro modeling.

The benefits of such a return should be irresistible. Most notably, GEM labor pricing uniquely enables causality from adverse nominal demand disturbances (NDD) to involuntary job loss. NDD induces same-direction movement in employment, output, pure profit, and investment. Microfounded macroeconomics becomes, at long last, consistent with the most critical cyclical evidence; and effective stabilization policymaking becomes consistent with modeling wholly rooted in rational behavior.

The policy-relevant story does not end there. Generalized-exchange modeling also enhances textbook microeconomics. The core micro innovation is the introduction of axiomatic features of large-establishment production of goods and services – most critically, costly, asymmetric workplace information and routinized jobs – that enable micro textbooks to adequately capture labor pricing in modern economies. Profit-maximizing large-establishment wage setting augments standard competitive-market labor pricing which, in the basic generalized-exchange theory, is confined to small firms capable of cost-effective employee oversight.

The most broadly consequential micro innovation resulting from generalized-exchange labor pricing is the ubiquity of continuous-equilibrium wage rents. Such rents have been apparent in the evidence for a long time, but the GEM Project was needed before  $W^n > W^m$  could rewrite neoclassical microeconomics.

In an outcome familiar to everybody but market-centric economists, the Project partitions employment into “good” (rent-paying) jobs, which must be rationed, and plentiful “bad” (no-rent) jobs, with inter-venue labor flows governed by well-established Harris-Todaro mechanics. Large-firm equilibrium, featuring  $W = W^n > MRS = W^m$ , pushes employees off their labor-market supply curve. Payment of wage rents permits management to unilaterally set the workweek, preventing most employees from working the number of hours desired. Rational labor pricing suppresses employee work-leisure choice and generates long-tenured employment. Worker attention centers on optimizing discretionary on-the-job behavior. Outside large firms, labor optimization is constrained by workers’ frustrated desire to obtain rationed high-wage jobs for which they are qualified, reconciling market supply-demand disequilibrium and continuous, constrained decision-rule equilibrium. In the small firm, employees are rationally paid their market-opportunity costs, restricting their rational decisionmaking to work-leisure choice and the on-going quest for rent-paying jobs. The small firm experiences substantial job churning.

The methodological message two-fold. First, the GEM Project is not a radical departure from mainstream economics. It is, instead, an incremental extension of Ronald Coase’s “obvious” enrichment of economic theory via investigation of institutional structure of production, especially in the aftermath of the Second Industrial Revolution. Second, reintroducing MWR, now fully microfounded, as a keystone concept in economic theory is fundamentally important. Macro modeling that is both coherent and policy-relevant is not possible without it.

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