



**IZA**



## Award Statement

### Prize Winner 2005

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The IZA Prize in Labor Economics 2005 is awarded to Dale T. Mortensen (Ida C. Cook Professor of Economics and Director of the Mathematical Methods in the Social Sciences Program at Northwestern University) and Christopher A. Pissarides (Professor of Economics and Director of the research program on Technology and Growth at the Centre for Economic Performance at the London School of Economics), for their path-breaking contributions to the analysis of markets with search and matching frictions. The vast literature that was stimulated by their fundamental contributions to search and matching theory is evidence of the power of their approach to the analysis of interactions in labor markets, marriage markets, housing markets, or generally in all markets with frictions. Both their individual contributions and their joint development of a dynamic equilibrium model of labor markets account for much of the success of job search theory and the flows approach in becoming a leading tool for microeconomic and macroeconomic analysis of labor markets. Their models, which are now widely used in labor economics and macroeconomics, have highly enriched research on unemployment as an equilibrium phenomenon, on labor market dynamics and cyclical adjustment. Dale Mortensen's and Christopher Pissarides's research on labor market search and job matching has also significantly directed and shaped the empirical literature.

Dale Mortensen has pioneered the study of individual workers' job search decisions. The insight of his classic article entitled "Job Search, the Duration of Unemployment, and the Phillips Curve" (*American Economic Review*, 1970) that labor market frictions can be represented by stochastically arriving matching opportunities has provided crucial thrust to the idea that searching for wage offers and jobs is costly when workers and firms lack full information about prices in the labor market. This pioneering work, in which unemployment is interpreted as a voluntary spell of searching for the most suited job at the best rate of pay, constituted a genuine paradigm shift in thinking about unemployment. His insight that search frictions can be modeled as random arrival of trading partners has also revolutionized research on labor turnover and reallocation, as well as research on personal relationships. Dale Mortensen subsequently continued to advance the frontiers of the field. "Search, Layoffs and Labor Market Equilibrium" (*Journal of Political Economy*, 1980), an article he wrote jointly with Kenneth Burdett, explains search and layoff unemployment as equilibrium phenomena and shows how the intensity with which workers search and the decision when to accept a job offer determine the distribution of unemployment durations. Mortensen's article "Property Rights and Efficiency in Mating, Racing and Related Games" (*American Economic Review*, 1982) shows that an efficient equilibrium exists in bilateral search models and that this equilibrium is attained when the entire match surplus is allocated to the contacting agent. In his article "Wage Differentials, Employer Size and Unemployment" with Ken Burdett (*International Economic Review*, 1998) he demonstrates how a search model with wage posting can generate wage dispersion.

Christopher Pissarides has broken new ground in studying macroeconomic implications of the flows approach to labor market analysis by using the matching function as a tool to study equilibrium unemployment in his article "Job Matching with State Employment Agencies and Random Search" (*Economic Journal*, 1979). The matching function relates job creation to the number of unemployed, the number of job vacancies and the intensities with which workers search and firms recruit. It successfully captures the key implications of frictions that prevent an instantaneous encounter of trading partners and has proved a particularly powerful tool for modeling two-sided search frictions that stem from informa-

tion imperfections about potential trading partners, not least because it can be incorporated in models without adding excessive complexity. Pissarides further developed the matching model, which is at present the leading tool for studying imperfect labor markets in macroeconomics, in subsequent studies of equilibrium unemployment dynamics. His article "Short-Run Equilibrium Dynamics of Unemployment, Vacancies, and Real Wages" (*American Economic Review*, 1985) highlights the effects of cyclical productivity changes on vacancy posting, labor market adjustment dynamics, unemployment and wage dynamics. It rationalizes why vacancies respond more quickly and with greater amplitude to shocks than unemployment, that real wage changes do not fully reflect real output changes and that unemployment responds faster to a negative than to a positive shock. His article "Search Unemployment with On-the-job Search" (*Review of Economic Studies*, 1994) derives new results of the matching approach that arise when on-the-job search is introduced into the model. Pissarides has elaborated the matching approach in *Equilibrium Unemployment Theory* (1990, 2000), which has become the leading textbook in the field.

Dale Mortensen and Christopher Pissarides joined forces to advance the equilibrium search approach by integrating the two lines of research that they had shaped before. Their co-authored article "Job Creation and Job Destruction in the Theory of Unemployment" (*Review of Economic Studies*, 1994) develops the famous Mortensen and Pissarides model of equilibrium unemployment, which has been at the core of much theoretical work during the past decade. Dale Mortensen's and Christopher Pissarides's equilibrium search framework is widely used in theoretical work, particularly because it can generate cyclical fluctuations in job flows. At the same time it is flexible enough to accommodate a host of alternative mechanisms of wage determination, ranging from ex post bargaining and various forms of union bargaining to efficiency wage theory and wage posting by employers. Their model is also a powerful tool for assessing labor market policies, which they substantiate in their joint article "Unemployment Responses to 'Skill-Biased' Technology Shocks: The Role of Labour Market Policy" (*Economic Journal*, 1999). In this contribution they demonstrate that skill-biased shocks can explain why and how different unemployment insurance and employment protection policies can lead to the differential employment and wage outcomes that are observed in practice.

Dale Mortensen and Christopher Pissarides have jointly presented the essence of their ideas and the insights of the immense literature that was stimulated by the search and matching framework in two state-of-the-art articles that are the prime references for researchers interested in the field: "Job Reallocation, Unemployment Fluctuations and Unemployment Differences" (in *Handbook of Macroeconomics*, 1999) focuses on the macroeconomic implications of the flows approach while "New Developments in Models of Search in the Labor Market" (in *Handbook of Labor Economics*, 1999) centers on the implications of search decisions at the individual worker level.

The IZA Prize in Labor Economics 2005 honors the pioneering work of these two exceptionally creative scholars, who have revolutionized theoretical and empirical labor market research.

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