The book brings together articles published by Daniel Hamermesh between 1969 and 2013 on the general topic of the demand for labor. The first section presents empirical studies of basic issues in labor demand, including the extent to which different types of labor are substitutes, how firms’ and workers’ investments affect labor turnover, and how costs of adjusting employment affect the dynamics of employment and patterns of labor turnover. The second section examines the impact of various labor-market policies, including minimum wages, penalty pay for using overtime hours or hours worked on weekends or nights, severance pay for displaced workers, and payroll taxes to finance unemployment insurance benefits. The final section deals with general questions of discrimination by employers along various dimensions, including looks, gender, and ethnicity, in all cases analysing the process of discrimination and the behavior that results. Throughout, the focus is on the development of theoretically-based hypotheses and testing them using the most appropriate data, often data collected uniquely for the particular project.
Demand for Labor
The Neglected Side of the Market
IZA Prize in Labor Economics Series

Since 2002, the Institute for the Study of Labor (IZA) has awarded the annual IZA Prize in Labor Economics for outstanding contributions to policy-relevant labor market research and methodological progress in this sub-discipline of economic science. The IZA Prize is the only international science prize awarded exclusively to labor economists. This special focus acknowledges the global significance of high-quality basic research in labor economics and sound policy advice based on these research findings. As issues of employment and unemployment are among the most urgent challenges of our time, labor economists have an important task and responsibility. The IZA Prize in Labor Economics is today considered one of the most prestigious international awards in the field. It aims to stimulate further research on topics that have enormous implications for our future. All prize-winners contribute a volume to the IZA Prize in Labor Economics Series published by Oxford University Press, which has been established to provide an overview of the laureates’ most significant findings.

The IZA Prize in Labor Economics has become an integral part of the institute’s manifold activities to promote progress in labor market research. Based on nominations submitted by the IZA Research Fellows, a high-ranking IZA Prize Committee selects the prize-winner. In conjunction with the Award Ceremony the IZA Prize Conference brings together a number of renowned experts to discuss topical labor market issues.

It is not by coincidence that the IZA Prize in Labor Economics Series is published by Oxford University Press. This well-reputed publishing house has shown a great interest in the project from the very beginning as this exclusive series perfectly complements their range of publications. We gratefully acknowledge their excellent cooperation.

Klaus F. Zimmermann, IZA Director
Winners of the IZA Prize in Labor Economics

2013  Daniel S. Hamermesh (University of Texas at Austin and Royal Holloway, University of London)
2012  Richard Blundell (University College London and IFS)
2011  George J. Borjas (Harvard University)
       Barry R. Chiswick (George Washington University)
2010  Francine D. Blau (Cornell University)
2009  Richard A. Easterlin (University of Southern California)
2008  Richard Layard (London School of Economics)
       Stephen J. Nickell (Nuffield College)
2007  Richard B. Freeman (Harvard University)
2006  David Card (University of California, Berkeley)
       Alan B. Krueger (Princeton University)
2005  Dale T. Mortensen (Northwestern University)
       Christopher A. Pissarides (London School of Economics)
2004  Edward P. Lazear (Stanford University)
2003  Orley C. Ashenfelter (Princeton University)
2002  Jacob Mincer (Columbia University)
Daniel S. Hamermesh
2013 IZA Prize Laureate
Demand for Labor

The Neglected Side of the Market

Daniel S. Hamermesh

Edited by
Corrado Giulietti
Klaus F. Zimmermann

OXFORD UNIVERSITY PRESS
Award Statement of the IZA Prize Committee

The 2013 IZA Prize in Labor Economics is awarded to Daniel S. Hamermesh (University of Texas at Austin; Royal Holloway, University of London) for his fundamental contributions to the analysis of labor demand. In his work, Hamermesh has demonstrated that many important topics in labor economics, such as the unemployment implications of minimum wages or job security programs, can only be understood within a framework that allows a thorough analysis of demand-side reactions in labor markets. Hamermesh’s research is characterized by a focus on thought-provoking questions, a high level of creativity, and careful combination of theoretical and empirical methods. He has shaped the way other scholars, as well as policy makers, think about some of the key issues in labor economics.

The question how firms adjust employment in response to fluctuations in product demand and other exogenous shocks is of fundamental importance for assessing unemployment and labor market dynamics. Hamermesh was among the first scholars to point out the importance of detailed micro-level estimates of adjustment costs for understanding firms’ demand for labor. In his article “Labor Demand and the Structure of Adjustment Costs” (American Economic Review, 1989), he used plant-level data to demonstrate that adjustment processes in individual firms occur in discrete jumps rather than continuously. A key reason for this effect is that firms face important fixed costs when adjusting their labor inputs. For instance, the costs of advertising vacancies and interviewing candidates do not depend – at least within certain ranges – on the number of workers that a firm seeks to hire. The presence of such fixed costs generates non-convex
adjustment cost functions for firms, resulting in incentives to adjust their workforce in a “lumpy”, non-continuous way. In contrast, most of the earlier labor demand models had neglected fixed costs in hiring and laying off workers, and instead assumed a convex variable cost structure, leading to smooth adjustments of factor inputs. Hamermesh’s analysis also demonstrated that detailed establishment-level data is necessary to gain deeper empirical insights into the dynamic aspects of labor demand, and that the use of more aggregated data can be misleading. Hamermesh’s findings led to a re-examination of the traditional labor demand model, and they have spurred the interest of many scholars in analyzing labor adjustments and their costs on a more fine-grained level.

Hamermesh also dealt with a variety of other fundamental issues in labor demand. For instance, he analyzed substitution patterns among workers of different demographic backgrounds; he studied the determinants of labor-demand adjustments at the extensive vs. intensive margin; and he contributed to a better understanding of how labor market institutions such as minimum wage laws affect labor demand. The increasing interest in labor-demand analysis spurred by his pioneering contributions, as well as subsequent work by others in the field, culminated in Hamermesh’s book Labor Demand (1993). This book provides the most comprehensive overview on the theoretical contributions and key empirical findings on the topic to date.

Besides his long-standing interest in labor demand, Hamermesh pioneered the economic analysis of time-use data and contributed to a broad set of other topics in economics. He has a unique talent to use traditional economic rationales in novel and often surprising applications. Along the lines of his semi-popular book Economics Is Everywhere (2009), Hamermesh has analyzed, for instance, the economic determinants of suicide, the impact of beauty on individuals’ labor market outcomes, and the question how umpires’ ethnic preferences are expressed in their evaluation of Major League Baseball pitchers. In addition to his scientific achievements, Hamermesh is widely recognized as a mentor to many junior scholars. As the author of his own blog and a regular guest contributor to the popular Freakonomics blog, he has also helped communicate economic thinking to a wider audience.

Daniel S. Hamermesh is Sue Killam Professor in the Foundation of Economics at the University of Texas at Austin and Professor of Eco-
nomics at Royal Holloway University of London. He earned his A.B. from the University of Chicago (1965) and his Ph.D. from Yale (1969). Before moving to Texas in 1993, he taught at Princeton and Michigan State. Hamermesh is a Research Fellow of the Institute for the Study of Labor (IZA), a Fellow of the Econometric Society and the Society of Labor Economists (SOLE), a Research Associate of the National Bureau of Economic Research (NBER), and Past President of SOLE and of the Midwest Economics Association. He received the Humboldt Foundation Research Prize in 2011 and the Mincer Award from the Society of Labor Economists in 2013.

George A. Akerlof, University of California, Berkeley; IZA

Corrado Giulietti, IZA

Richard Portes, London Business School; President CEPR

Jan Svejnar, University of Michigan, Ann Arbor; IZA

Klaus F. Zimmermann, IZA; University of Bonn
The 2013 IZA Prize in Labor Economics was awarded to Daniel (Dan) S. Hamermesh (University of Texas at Austin and Royal Holloway) for his fundamental contributions to the analysis of labor demand. The IZA Prize has been conferred every year since 2002 to honor groundbreaking research in the field of labor economics. Past winners include Nobel Laureates like the late Dale T. Mortensen (Northwestern University) and Christopher A. Pissarides (London School of Economics). The 2013 Prize was presented to the Prize Winner during the award ceremony, which took place November 18, 2013 in Washington, DC. IZA Prize Laureate George J. Borjas of Harvard University gave the laudation speech, highlighting Hamermesh’s notorious excellence and eclecticism as both a researcher and teacher. In Borjas’ words: “Not only has Dan published a ton of papers, but the work shows an impressive depth and breadth. He has worked on: labor demand, time use, unemployment insurance, beauty, food stamps, the economics of sleeping, search theory, life expectancy, suicide, retirement, compensating differentials, academic labor markets, discrimination, the Phillips curve, unions, and much, much more. It is hard to think of any other labor economist who has tackled so many different topics so successfully.”

The ceremony was followed by the IZA Prize Workshop on Frontiers in Labor Economics held in honor of Hamermesh and which featured presentations from distinguished scholars. Joseph G. Altonji (Yale University) presented a paper about the labor market outcomes of college graduates who entered the labor market during the last recession. George J. Borjas discussed the latest results from his analysis about the effects of winning prestigious prizes on future productivity of academics. Janet Currie (Princeton University) outlined her study about
the impact of diagnostic and surgical skills on the rate of Caesarean sections performed in the United States. Gerard A. Pfann (Maastricht University) presented his research about the different procedures to dissolve permanent worker contracts in the Netherlands.

The work of Dan Hamermesh has substantially influenced the way labor economists think about labor demand\(^1\), both under a theoretical and an empirical viewpoint. Until recently, economists have been more interested in the supply rather than the demand side of labor. As Hamermesh’s famous labor demand textbook reports (Hamermesh, 1993 p. 7), the number of publications in top economics journals related to labor supply was much higher than the one related to labor demand. This was perhaps due to the larger availability of household surveys vis-à-vis the scarcity of firm data, as well as to the consequent greater effort that scholars would have to put forth to develop appropriate econometric techniques to analyze labor supply. To put it in Hamermesh’s words, labor demand was for a long time the “neglected side of the market.”

Against this background, Hamermesh tenaciously pursued the principle that learning how firms demand workers and hours is as important as understanding how individuals supply labor. His admirable research effort, marked by seminal scholarly contributions, culminated in his chapter “The Demand for Labor in the Long Run” included in the Handbook of Labor Economics edited by Orley Ashenfelter and Richard Layard (1986) and in the book “Labor Demand” (1993). Even today these two pieces constitute the most comprehensive and important references for labor demand research. One of the major elements emerging from Hamermesh’s study of labor demand is that higher labor costs (such as higher wage rates induced by minimum wages or employee benefits) are beneficial for workers but could lead firms to reduce the number of jobs and shorten working hours. This argument is also effectively summarized in his contribution (Hamermesh, 2014) to the IZA World of Labor – a recently launched outlet summarizing the most important policy-relevant findings from research into an accessible format. The strong academic influence of Hamermesh is reflected by his remarkable citation record. As of the end of June 2015, the Handbook chapter obtained 503 Google citations, while the Labor Demand book attained as many as 2,226 (see Figure I.1 Panel A).

Hamermesh has been a pioneer of other areas besides labor demand. What best characterizes his approach is the choice of controversial and

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\(^1\) For an intuitive introduction into labor demand, see his recent IZA World of Labor piece (Hamermesh, 2014).
understudied areas that economists have yet to explore. Emblematic is
the co-authored paper “An Economic Theory of Suicide” published in
the Journal of Political Economy in 1974, in which suicidal behavior
is cast into a utility maximizing framework and is empirically investi-
gated. In this and many other areas (time use and beauty, to mention
a few) Hamermesh has been a pathfinder for many economists, very
much like the late Gary S. Becker of Chicago University. Hamermesh’s
work features rigorous (but simple) theoretical framework modeling
and thorough data analysis. When the questions he poses cannot be
investigated through existing surveys, Hamermesh searches, collects
and assembles the data needed to test his hypotheses.

This Volume collects Hamermesh’s key contributions on labor de-
mand. Part II “Aspects of Labor Demand” follows this foreword and
contains a brief overview by Hamermesh about labor demand research
and its importance. The contributions are organized into three parts:
Part III “Labor Demand,” Part IV “Policy on the Demand Side” and Part V “Discrimination: Preferences for People.” Hamermesh’s research covered in this Volume has had enormous impact in the academic community. As of the end of June 2015, the number of Google citations reached 1,081 (Part III), 334 (Part IV) and 1,595 (Part V), as seen in Figure I.1, panels B, C and D.

Hamermesh’s early research provides empirical applications to the static theory of factor demand, which is represented by the first article collected in Part III “Labor Demand.” Such microeconomic theory was the workhorse of labor demand for many years, but was lacking empirical evidence until Hamermesh and a few other scholars pioneered data analysis. Perhaps Hamermesh’s finest intuition within this area has been that substitution in the demand of workers may occur not only between different occupation groups, but also between different demographic groups. To this aim, he and his coauthor exploit data from the sharp increase in the U.S. labor supply, which has been observed since the mid-1960s to estimate the elasticity of substitution between women and of young workers (Chapter 1).

Hamermesh’s major interest, however, lies with the dynamics of labor demand, i.e., how firms adjust labor in response to large shocks. This was a question that was of interest to macroeconomists only—until scholars like Hamermesh demonstrated that labor economics could indeed provide important insights. The remainder of Part III contains his most important contributions in the theory and applications of labor demand dynamics. In one of his earliest works (Chapter 2) Hamermesh departs from the business cycle definition as classically defined by macroeconomists and argues that seasonal cycles can provide a greater deal of data to analyze. This allows him to investigate how fluctuations in hiring compare to those in layoffs.

Another challenge to traditional labor demand models comes from Hamermesh’s analysis of employment adjustments. His pioneering contribution (Chapter 3) shows that firms do not respond to shocks by adjusting employment in a smooth way; they do so through discrete jumps due to the presence of fixed costs (e.g., for hiring). Hamermesh further delves into important aspects of adjustment costs. First (Chapter 4), he studies the nature of adjustment costs demonstrating the existence and importance of both gross costs (when hiring does not change the employment level) versus net costs (incurred when the scale of employment changes). Second (Chapter 5), he investigates whether the adjustment costs respond symmetrically to negative and
positive shocks. In the study that concludes the Part “Labor demand” of this Volume (Chapter 6), Hamermesh and coauthor argue that it is important to keep the concept of job creation and destruction distinct from that of worker flow (i.e., hiring/firing). The distinction is critical since there can be hiring even when firms are not expanding employment; similarly, layoffs are not just a phenomenon of firms where employment is shirking.

Over the years, Hamermesh became interested in exploring how the study of labor demand could provide useful evaluations and predictions about the impact of labor policy. Many such policies – such as minimum wages and regulations on working hours – have a direct influence on labor demand. The contributions collected in Part III “Policy on the Demand Side” empirically investigate how labor policy affects wages and employment, as well as the substitution between different types of labor. The first study concerns the impact of a minimum wage (Chapter 7). Hamermesh’s intuition is that minimum wage policies should be studied within a system of equations that include three factors: youth labor (the one most affected by the policy), adult labor and capital (for which the impact depends on the cross elasticity of demand). To date, his study remains one of the few that tackles the analysis of minimum wages within the rigorous framework of labor demand theory.

In a further study, Hamermesh and his coauthor exploit the introduction of an overtime wage premium for men in California to study how firms adjust employment (Chapter 8). By comparing the incidence of overtime work before and after the policy enactment, between men and women (for which the policy was already in force) and between California and other states (where the policy did not change for men), they provide estimates of the elasticity of demand in response to exogenous changes in wages. Starting from the observation that, besides working overtime, many people work outside regular working hours (e.g. weekends and/or nighttime), Hamermesh and coauthors explore the determinants of labor at different times (Chapter 9). The application to Portuguese data allows simulating what would be the effects of introducing U.S. regulations on working at unconventional times.

Hamermesh also embarked on studying the topic of job displacement (Chapter 10). His perspective, however, has been different from the mainstream labor literature, which was principally interested in understanding the consequences in terms of, e.g., re-employment wages. Instead Hamermesh poses the question about the necessity and efficacy of policy requiring employers to give notice of plant
closure and mass layoffs. To this aim, he exploits longitudinal data from which he can infer whether workers expect plant closure (and thus pre-adjust their human capital investment). In the Part’s last study (Chapter 11), Hamermesh and coauthor argue that a federally imposed tax ceiling increases the relative cost of low-skilled workers, making firms less likely to hire them. Hence, increasing the taxable amount per worker could alleviate such a distortion.

Part IV “Discrimination: Preferences for People” delves into the sources of discrimination. Hamermesh’s key argument is that discrimination is attributable to employers’ choices, and as such, is part of labor demand studies. Contrarily to mainstream literature interested in gauging discrimination, Hamermesh has been concerned with understanding its causes, mainly in relation to employers’ preferences. Hamermesh’s work into this area extends to postulating that beauty matters in the labor market since employers have preferences for it. The fascinating aspect is that he and his coauthor find empirical evidence that this is the case, even when using three separate datasets (Chapter 12). Similarly, and equally strikingly, Hamermesh and coauthor found that better-looking lawyers earn more than others (Chapter 14).

The study of another physical characteristic – height – lead Hamermesh to investigate whether employers discriminate more with respect to absolute or to relative differences in the characteristics they observe. In his study, he ingeniously exploits the fact that younger cohorts of Dutch men are much taller than older cohorts (Chapter 13). Hamermesh and coauthor explore gender discrimination in a thought-provoking study based on the American Economic Association’s officer elections (Chapter 15). The book’s concluding study (Chapter 16) investigates employee behavior when they expect that employers discriminate towards them. Hardly observable through standard employer-employee data, Hamermesh and coauthors creatively exploit baseball data where pitchers (read: employees) of certain minority groups behave differently when expecting that umpires (read: employers) will discriminate towards them.

Dan Hamermesh has been a devoted and energetic member of IZA and its network since the early days of the Institute. An IZA Research Fellow since 1998, Hamermesh was also Program Director of ”The Future of Labor” area from 2001 to 2008, during which he contributed to shaping the vision. He served as IZA Director of Research from August 2008 until January 2009 and has been a Visiting Research Fellow on numerous occasions. Hamermesh has authored a plethora of important
IZA Discussion Papers (34 as of the end of June 2015), many of which are now published in major outlets such as the American Economic Review. Furthermore, he has been an Editor (from 2001 to 2004) and is still an Associate Editor of the Journal of Population Economics, which is edited at IZA. Together with Gerard A. Pfann he has implemented the IZA-SOLE Transatlantic Meeting of Labor Economists – 2015 marks the fourteenth edition – which provides a forum for distinguished labor economists worldwide. Over the years, Hamermesh has been an excellent mentor and a source of inspiration for IZA researchers in Bonn.

Hamermesh’s work on labor demand intersects with essentially all of IZA’s Research Areas, but perhaps most prominently with the “The Future of Labor,” “Behavioral and Personnel Economics” and “Labor Markets and Institutions.” Since its inception, IZA has been active in labor demand research on many fronts, covering this topic within its many workshops, conferences and projects. Modeling labor demand in simulations of labor market reform packages has proven to be essential in various policy studies, including Riphahn et al. (1999) and Schneider et al. (2002). Here the work of Hamermesh has been very influential. Such research has also generated research on the determinants of the demand for household work through subsidized household work agencies (Brück et al., 2006).

In 2010, IZA evaluated a field experiment in collaboration with the Federal Anti-Discrimination Agency in Germany to investigate the effectiveness of anonymous job applications as a tool for reducing hiring discrimination. One of the main findings of the IZA team is that through anonymous job applications, job seekers have equal chances to be interviewed. Thus, if discrimination about a certain characteristic exists, concealing such a characteristic in the job application may result in less discrimination (Krause et al., 2012).

Recently the Institute was part of NEUJOBS, a large collaborative research project financed by the European Union to analyze possible developments in the European labor market. Research from this project shows that labor demand analysis is crucial to our understanding of policy reform effects in the labor market (Peichl and Siegloch, 2012) and of the distributional consequences of economic crises (Bargain et al., 2012). The IZA World of Labor also includes many topics related to labor demand and to Hamermesh’s work covered in this book, from the employment effects of minimum wages (Neumark, 2014), to the discrimination in hiring (Rinne, 2014) and the measurement of work hours (Steward, 2014).
The importance of labor demand at IZA is clear, as seen through the topic’s extensive coverage throughout the IZA network’s discussion papers. As of the end of 2014, nearly 400 out of about 9,000 IZA Discussion Papers investigated core labor demand issues (JEL code J23, see Figure I.2). These discussion papers alone generated over one million downloads through the IZA website.

It is thanks to innovative and insightful scholars such as Dan Hamermesh – capable of blending theoretical insight with creative empirical analysis – that labor economics is nowadays a prominent field. The 2013 IZA Prize and this Volume cherish his pioneering contribution to the study of labor demand.
About the Author...

Daniel S. Hamermesh is Sue Killam Professor in the Foundations of Economics at the University of Texas at Austin and Professor of Economics, Royal Holloway University of London. His A.B. is from the University of Chicago (1965), his Ph.D. from Yale (1969). He taught from 1969–73 at Princeton, from 1973–93 at Michigan State, from 2009–12 at Maastricht University, and has held visiting professorships in the United States, Europe, Australia and Asia. He is a Fellow of the Econometric Society, a research associate of the National Bureau of Economic Research, and was President of the Society of Labor Economists in 2001.

He authored Labor Demand, The Economics of Work and Pay, Economics Is Everywhere, Beauty Pays, and a wide array of articles in labor economics in the leading general and specialized economics journals.

His research concentrates on time use, labor demand, discrimination, social insurance programs (particularly unemployment insurance), and unusual applications of labor economics (to suicide, sleep and beauty).

He joined IZA as a research fellow in July 1998. From December 2001 until July 2008, he was IZA Program Director for the institute’s research program "The Future of Labor." He served as IZA Director of Research from August 2008 until January 2009.

Daniel S. Hamermesh received the 2013 IZA Prize in Labor Economics.
Corrado Giulietti has been IZA Director of Research since March 2013. He received his PhD from the University of Southampton in January 2010. He joined IZA as a Research Associate in March 2010. From September 2010 until February 2013 he served as Deputy Program Director for the Migration Area. From October 2011 until February 2013 he was Deputy Director of Research. His current research interests are labor economics and applied econometrics, with a focus on the determinants of migration, the labor market and welfare effects of migration, the assimilation of immigrants, and the estimation of migration flows.

Klaus F. Zimmermann has been Full Professor of Economics at the University of Bonn and Director of the Institute for the Study of Labor since 1998. From 2000 until 2011 he was President of the German Institute for Economic Research (DIW Berlin). Zimmermann is Honorary Professor of Economics at the Free University of Berlin (since 2001) and Honorary Professor at the Renmin University of China (since 2006), and was Chairman of the Society of the German Economic Research Institutes (ARGE) from 2005 until 2011. Klaus F. Zimmermann is author or editor of more than 50 books, more than 140 papers in refereed research journals, and almost 150 chapters in collected volumes. He is Editor-in-Chief of the Journal of Population Economics, acts as the Chair of the Economics Section and a Council member of the Academia Europaea, and is a member of the German Academy of Sciences Leopoldina. Zimmermann regularly advises the World Bank, the European Commission, and various national governments. His main research interests are in migration, labor economics, and population economics. In 2013 he received the Outstanding Contribution Award of the European Investment Bank (EIB Prize).