CONTENTS

Foreword xix

1 An Overview of Auditing for Discrimination 1
   Michael Fix, George C. Golster, and Raymond J. Struyk
   The Context for Expanding the Use of Testing 3
      Trends in the Attitudes of Whites 3
      Current Knowledge about Discrimination 7
   Advantages and Ethics of Auditing 11
      Arguments for Auditing 12
      The Ethics of Auditing 16
   Audit Findings in Brief 18
   Methodological Issues Related to Designing, Interpreting, and Statistically Evaluating Audits 25
      What Do We Mean by Racial Discrimination? 25
      Do Audits Provide Data on the Appropriate Statistical Measure? 29
      Other Methodological Issues 29
      Clear and Convincing Evidence? 34
   Consequences of Strong Documentation 35
   Testing as an Enforcement Strategy: The Case of Housing 37
   Effectiveness in Combating Discrimination 38
   Testing/Auditing as Part of a Comprehensive Enforcement Effort 39
   Future Directions for Auditing 41
      Lessons from Housing 41
      Credit Studies 42
      Employment Studies 43
   Appendix 1.A: Interpreting Audits Using Different Definitions of Discrimination 50
   Appendix 1.B: Linking Audit Methodology to Conventional Estimation Approaches 57
2 Access Denied, Access Constrained: Results and Implications of the 1989 Housing Discrimination Study  
John Yinger  
Introduction 69  
The Housing Discrimination Study 70  
HDS Audit Methodology 70  
Types of Agent Behavior 71  
The Incidence of Discrimination in Housing Availability 73  
Net and Gross Approaches to the Incidence of Discrimination 73  
Accounting for the Audit Study Design 74  
Estimates of the Incidence of Discrimination 80  
Severity of Discrimination in Housing Availability 85  
Measuring the Severity of Discrimination 85  
The Relationship between Incidence and Severity of Discrimination 87  
Estimates of the Severity of Discrimination 90  
Opportunity to Discriminate and Marginal Discrimination 91  
Estimates of Marginal Discrimination 93  
Other Forms of Discrimination 96  
Indexes for Other Forms of Discrimination 96  
Estimates of Discrimination 97  
Conclusion: To What Extent Does Discrimination Constrain Minority Homeseekers' Access to Housing? 103  

Going beyond the Housing Discrimination Study:  
Comments  
William R. Tisdale 113  

3 Limits on Neighborhood Choice: Evidence of Racial and Ethnic Steering in Urban Housing Markets  
Margery Austin Turner  
Introduction 117  
Analyzing Steering with Audit Data 119  
Previous Audit Studies of Steering 119  
Housing Discrimination Study 121  
Measurement Issues 123  
Incidence and Severity of Steering in the Housing Discrimination Study 125  
Incidence and Severity of Steering 126
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neighborhood Characteristics of Audited Addresses</td>
<td>132</td>
</tr>
<tr>
<td>Neighborhood Marketing Practices</td>
<td>137</td>
</tr>
<tr>
<td>Patterns of Newspaper Advertising</td>
<td>138</td>
</tr>
<tr>
<td>Patterns of Housing Search</td>
<td>140</td>
</tr>
<tr>
<td>Implications for Neighborhood Choice and Public Policy</td>
<td>142</td>
</tr>
<tr>
<td>The Persistence of Residential Segregation</td>
<td>142</td>
</tr>
<tr>
<td>Policy Interventions and Research Issues</td>
<td>143</td>
</tr>
<tr>
<td>Appendix 3.A: Matching Audited Addresses to Census Tracts</td>
<td>148</td>
</tr>
<tr>
<td>Appendix 3.B: Selected Census Tracts in Washington, D.C., and Prince George's County</td>
<td>150</td>
</tr>
<tr>
<td>The Real Estate Industry's View of Audit Results:</td>
<td>153</td>
</tr>
<tr>
<td>Comments Robert D. Butters</td>
<td></td>
</tr>
<tr>
<td>4 The Urban Institute Audit Studies: Their Research and Policy Context</td>
<td>165</td>
</tr>
<tr>
<td>Ronald B. Miny</td>
<td></td>
</tr>
<tr>
<td>Introduction</td>
<td>165</td>
</tr>
<tr>
<td>Labor Markets and the Urban Underclass</td>
<td>166</td>
</tr>
<tr>
<td>Previous Studies</td>
<td>167</td>
</tr>
<tr>
<td>Urban Institute Audit Studies</td>
<td>169</td>
</tr>
<tr>
<td>Brief Review of Findings</td>
<td>171</td>
</tr>
<tr>
<td>Denver Audit Study</td>
<td>175</td>
</tr>
<tr>
<td>Implications for Policy and Research</td>
<td>177</td>
</tr>
<tr>
<td>Labor Market Performance</td>
<td>177</td>
</tr>
<tr>
<td>Antidiscrimination Policies</td>
<td>178</td>
</tr>
<tr>
<td>Suggestions for Future Research</td>
<td>182</td>
</tr>
<tr>
<td>5 The Urban Institute Audit Studies: Their Methods and Findings</td>
<td>187</td>
</tr>
<tr>
<td>James J. Heckman and Peter Siegelman</td>
<td></td>
</tr>
<tr>
<td>Introduction</td>
<td>187</td>
</tr>
<tr>
<td>How Audits Work</td>
<td>190</td>
</tr>
<tr>
<td>How the Audit Method Might Improve Our Knowledge of Labor Market Discrimination</td>
<td>193</td>
</tr>
<tr>
<td>Evidence for Discrimination in Hiring</td>
<td>194</td>
</tr>
<tr>
<td>Discrimination in What?</td>
<td>194</td>
</tr>
<tr>
<td>Unequal Treatment of &quot;Identical&quot; Pairs as a Measure of Discrimination</td>
<td>194</td>
</tr>
<tr>
<td>Symmetrical Treatment vs. Zero Differences</td>
<td>197</td>
</tr>
<tr>
<td>Tests for Homogeneity across Pairs (Pooling)</td>
<td>201</td>
</tr>
</tbody>
</table>
Contents

Tests for Symmetry of Treatment 203
Qualifying the Urban Institute Conclusions: Some Limitations of the Evidence 212
Sampling Frame 213
Experimenter Effects 215
Posing and the Use of False Credentials 217
Facial Hair and Accents 217
Additional Comments on the Audit Studies 218
Evidence on Reverse Discrimination 218
Evidence on the Role of Hiring Discrimination in Explaining the Wage Gap 219
Comparing the Denver and Urban Institute Studies 220
The Value of Having More than Two Testers 222
A Behavioral Model of Firms’ Job Offers to Heterogeneous Workers 223
Implications for Policy and Future Research 224
Appendix 5.A: Mathematical Appendix 230
Appendix 5.C: Empirical Bayes Methods and the Sign Test 239
Appendix 5.D: A Model of the Hiring Decision 242

Audit Methodology: Comments  John Yinger 259

Response to Comments by John Yinger
James J. Heckman and Peter Siegelman 271

6 Policy Implications for Hispanic and Other National-Origin Groups  Antonia Hernández and Birgit Seifert 277
Importance of Auditing and Testing in Civil Rights Advocacy 277
Addressing Criticisms of Auditing and Testing 279
Committing Auditing and Testing Resources to All Protected Groups 282

7 Use of Testers in Investigating Discrimination in Mortgage Lending and Insurance  George C. Galster 287
Introduction 287
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>What Do We Know about Mortgage Lending and Insurance Patterns?</td>
<td>289</td>
</tr>
<tr>
<td>Lending Studies Using Original, Aggregate HMDA Data</td>
<td>291</td>
</tr>
<tr>
<td>Lending Studies Using New, Aggregate HMDA Data</td>
<td>294</td>
</tr>
<tr>
<td>Lending Studies Using New, Disaggregate HMDA Data</td>
<td>295</td>
</tr>
<tr>
<td>Insurance Studies</td>
<td>298</td>
</tr>
<tr>
<td>The Current State of Ignorance</td>
<td>299</td>
</tr>
<tr>
<td>Legal Issues in Lending and Insurance Testing</td>
<td>300</td>
</tr>
<tr>
<td>Legal Strictures against Discrimination in Lending and Insurance</td>
<td>300</td>
</tr>
<tr>
<td>Legal Precedents Related to Testing</td>
<td>301</td>
</tr>
<tr>
<td>Ethical Issues in Lending and Insurance Testing</td>
<td>302</td>
</tr>
<tr>
<td>Concerns over Entrapment, Privacy, Deception, and Fairness</td>
<td>302</td>
</tr>
<tr>
<td>Comparing Harms and Benefits</td>
<td>304</td>
</tr>
<tr>
<td>Previous Testing Pilot Studies of Lenders and Insurers</td>
<td>306</td>
</tr>
<tr>
<td>Lending Pilot Studies</td>
<td>306</td>
</tr>
<tr>
<td>The Milwaukee Pilot Study of Insurance</td>
<td>313</td>
</tr>
<tr>
<td>Methodological Issues in Lending and Insurance Testing</td>
<td>316</td>
</tr>
<tr>
<td>Detecting Subtle Differential Treatment</td>
<td>317</td>
</tr>
<tr>
<td>Distinguishing Systematic from Random Differences</td>
<td>317</td>
</tr>
<tr>
<td>Sample Design</td>
<td>318</td>
</tr>
<tr>
<td>Sample Size</td>
<td>319</td>
</tr>
<tr>
<td>Discovery</td>
<td>320</td>
</tr>
<tr>
<td>Extent of the Test into the Application Process</td>
<td>320</td>
</tr>
<tr>
<td>Tester Scenario</td>
<td>321</td>
</tr>
<tr>
<td>Analysis Design</td>
<td>323</td>
</tr>
<tr>
<td>Overall Evaluation, Policy Implications, and Future Directions</td>
<td>325</td>
</tr>
<tr>
<td>Evaluating the Method as a Research Tool</td>
<td>325</td>
</tr>
<tr>
<td>Implications for Regulatory Enforcement</td>
<td>326</td>
</tr>
<tr>
<td>Implications for Civil Rights Litigation</td>
<td>328</td>
</tr>
<tr>
<td>Suggested Future Directions</td>
<td>328</td>
</tr>
<tr>
<td>The Fair-Housing Movement's Alternative Standard for Measuring Housing Discrimination: Comments</td>
<td>335</td>
</tr>
<tr>
<td>Shanna L. Smith</td>
<td></td>
</tr>
</tbody>
</table>
8 Use of Testing in Civil Rights Enforcement
Roderic V. O. Boggs, Joseph M. Sellers, and Marc Bendick, Jr.
Introduction 345
The Washington Lawyers' Committee's Experience with Enforcement-Oriented Testing 345
Methodological Considerations in Enforcement-Oriented Employment Testing 349
Development of Testing Staff 350
Recording Test Experiences 352
Targeting of and Follow-up from Tests 354
Uses of Testing to Challenge Employment Discrimination 356
Surveying the Work Force 356
Monitoring Compliance with Injunctive Relief 356
Investigating Allegations of Employment Discrimination 359
Challenging Hiring Discrimination 361
Challenges to the Use of Testing as an Enforcement Tool 364
Future of Enforcement-Oriented Testing 367

9 Implications of Empirical Studies on Race Discrimination Christopher Edley, Jr.
Research by Trickery? 378
Methods and Inference 380
Confidence Levels 381
Type I and II Errors 382
Revising Prejudices 383
Combining Disparate Research Results 383
Knowing Enough 384
Status of Tester Litigation 385
The Housing Discrimination Precedent 388
Challenges in an Upside-Down World 389

The Need for Testing Endures after Two Decades:
Comments
Robert G. Schwemm 393

Extending the Reach of the Audit Methodology:
Comments John Charles Boger 399
Appendix: Summary of the Urban Institute's and the University of Colorado's Hiring Audits
Wendy Zimmermann

About the Editors

About the Contributors

Tables

1.1 Trends in White Attitudes toward Blacks in Housing and Employment, 1963-90
1.2 Audit Estimates of Unfavorable Treatment in Housing
1.3 Audit Estimates of Unfavorable Treatment in Employment
1.4 Variation in the Level of Unfavorable Treatment of Minorities across Metro Areas
2.1 Incidence of Discrimination in Housing Availability, Black/White Audits
2.2 Incidence of Discrimination in Housing Availability, Hispanic/Anglo Audits
2.3 Incidence and Severity of Discrimination in Housing Availability, Black/White Audits
2.4 Incidence and Severity of Discrimination in Housing Availability, Hispanic/Anglo Audits
2.5 Marginal Discrimination in Housing Inspections
2.6 Overall Incidence and Severity of Discrimination, Black/White Sales Audits
2.7 Overall Incidence and Severity of Discrimination, Black/White Rental Audits
2.8 Overall Incidence and Severity of Discrimination, Hispanic/Anglo Sales Audits
2.9 Overall Incidence and Severity of Discrimination, Hispanic/Anglo Rental Audits
3.1 Incidence of Steering for Black and White Home Buyers
3.2 Degree of Steering for Black and White Home Buyers
3.3 Severity of Steering for Black and White Home Buyers 128
3.4 Incidence of Steering for Hispanic and Anglo Home Buyers 130
3.5 Degree of Steering for Hispanic and Anglo Home Buyers 131
3.6 Severity of Steering for Hispanic and Anglo Home Buyers 131
3.7 Average Neighborhood Characteristics for Sales Audit Addresses 133
3.8 Agent's Office Location and Characteristics of Addresses Shown and Recommended 134
3.9 Determinants of Neighborhood Marketing 136
3.10 Houses for Sale, Advertised, and Advertised as Open House in Washington, D.C., Area Neighborhoods 139
3.11 Methods of Housing Search 142
3.A.1 Geo-Coding Success Rates: Sales and Agent Office Addresses 148
4.1 Racial/Ethnic Distribution of Population and Poverty for Four Metropolitan Areas 173
4.2 Stage at which Unfavorable Treatment Occurred 174
4.3 Percentage of Blacks and Hispanics in Four SMSAs Completing High School and College (1980) 177
5.1 Outcomes in the Urban Institute Black/White Study in Chicago and Washington, D.C. 195
5.2 Outcomes in the Urban Institute Anglo/Hispanic Study in Chicago and San Diego 196
5.3 Outcomes in the Denver Study 197
5.4 Comparison of $\chi^2$, "Augmented Cell" $\chi^2$, and Cressie-Read Tests for Independence of Outcomes across Pairs 202
5.5 Residual Analysis of Audit Pair Homogeneity 204
5.6 Likelihood Ratio Tests for Symmetrical Treatment of Testers within Pairs, and across Pairs and Cities 206
5.7 Inference on $H_0: P_3 = P_4$ from Large Sample, Exact tests, and Pooled $P$ Values 210
5.8 Search Methods of Employed and Unemployed Job Seekers: Means and Standard Deviations 214
5.9 Outcomes of Search Methods Used by Unemployed Youth 215
5.10 Disaggregated Denver Data: “Get a Job” Measure 221
7.1 Insurance Agent Request of Name by Area Racial Composition 314
7.2 Insurance Agent Request of Current Policy Information by Area Racial Composition 314
7.3 Type of Inspection Required by Area Racial Composition 315

**Figures**

1.B.1 Overview of HUD Complaint-Processing Procedures, 1989 46
2.1 The Stages of a Housing Market Transaction 72
2.2 Typology of Discrimination for Systematic Reasons and the Effects of Random Factors 76
2.3 The Severity of Discrimination in House Inspections 95
4.1 Differential Treatment and Differential Outcomes in the Hiring Process 172
5.1 A Schematic Representation of Outcomes in an Employment Audit 192
5.B.2 Cressie-Read Statistics Testing the Hypothesis of Homogeneity across Pairs of Testers for Black/White Pairs, Chicago 233
5.B.3 Cressie-Read Statistics Testing the Hypothesis of Homogeneity across Pairs of Testers for Anglo/Hispanic Pairs, San Diego 234
5.B.4 Cressie-Read Statistics Testing the Hypothesis of Homogeneity across Pairs of Testers for Anglo/Hispanic Pairs, Chicago 234
5.B.5 Cressie-Read Statistics Testing the Hypothesis of Homogeneity across Cities for Black/White Pairs 235
5.B.6 Cressie-Read Statistics Testing the Hypothesis of Homogeneity across cities for Anglo/Hispanic Pairs 235
5.B.7 Cressie-Read Statistics Testing the Hypothesis of Symmetrical Treatment of Majority and Minority Auditors for Black/White Pairs, Washington, D.C. 236
5.B.8 Cressie-Read Statistics Testing the Hypothesis of Symmetrical Treatment of Majority and Minority Auditors for Black/White Pairs, Chicago 236
5.B.9 Cressie-Read Statistics Testing the Hypothesis of Symmetrical Treatment of Majority and Minority Auditors for Anglo/Hispanic Pairs, San Diego 237
5.B.10 Cressie-Read Statistics Testing the Hypothesis of Symmetrical Treatment of Majority and Minority Auditors for Hispanic/Anglo Pairs, Chicago 237
5.B.11 Cressie-Read Statistics Testing the Hypothesis of Symmetrical Treatment of Majority and Minority Auditors for Black/White Pairs Aggregated by City 238
5.B.12 Cressie-Read Statistics Testing the Hypothesis of Symmetrical Treatment of Majority and Minority Auditors for Anglo/Hispanic Pairs Aggregated by City 238
5.C.1 Likelihood Ratio Tests of Symmetry 241
5.D.1 Standardized Relative Hiring Rate 251
5.D.2 Standardized Relative Hiring Rate 252
5.D.3 Effects of Standardizing the Observed Characteristic at Different Levels on Relative Hiring Rates for Minority and Majority Testers 253