



Are Firms That Discriminate More Likely to Go Out of Business?

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Abstract: Economic theory has long maintained that employers pay a price for engaging in racial discrimination. According to Gary Becker's seminal work on this topic and the rich literature that followed, racial preferences unrelated to productivity are costly and, in a competitive market, should drive discriminatory employers out of business. Though a dominant theoretical proposition in the field of economics, this argument has never before been subjected to direct empirical scrutiny. This research pairs an experimental audit study of racial discrimination in employment with an employer database capturing information on establishment survival, examining the relationship between observed discrimination and firm longevity. Results suggest that employers who engage in hiring discrimination are less likely to remain in business six years later.

Keywords: discrimination; firm survival; Gary Becker; audit study

ECONOMIC theory has long maintained that employers pay a price for engaging in racial discrimination. According to Gary Becker's (1957) seminal work on this topic and the rich literature that followed, racial preferences unrelated to productivity are costly and, in a competitive market, should drive discriminatory employers out of business (Arrow 1972; Charles and Guryan 2008; Ehrenberg and Smith 2003; Altonji and Blank 1999; Lang 2007). Though a dominant theoretical proposition in the field of economics, this argument has been subjected to surprisingly little empirical scrutiny, largely due to the problems of measuring discrimination. This study offers a unique window into the relationship between discrimination and firm survival, pairing an experimental audit study of racial discrimination in employment with an employer database capturing information on establishment survival. Results suggest that employers who engage in hiring discrimination are less likely to remain in business six years later.

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The Long-Run Consequences of Discrimination

Gary Becker's (1957) treatise, *The Economics of Discrimination*, stimulated a long and productive line of work examining the causes and consequences of labor market discrimination. In this work, Becker conceptualizes racial bias as a preference for avoiding contact with members of an outgroup. Employers with this "taste for discrimination" are willing to pay higher wages to members of the ingroup in order to indulge this preference. The long-run implication of this idea, pointed out by Becker and developed further by those who followed, is that the costs of discrimination will ultimately undermine competitiveness.

If an individual has a 'taste for discrimination,' he must act as if he were willing to pay something either directly or in the form of a reduced income, to be associated with some persons instead of others. When actual discrimination occurs, he must, in fact, either pay or forfeit income for this privilege (Becker 1957:14).

Arrow (1973) draws out the implication of this observation: "In the long run . . . Only the least discriminatory firms survive. Indeed, if there were any firms that did not discriminate at all, these would be the only ones to survive the competitive struggle" (p. 10).

In the face of evidence of persistent labor market discrimination (e.g., Bertrand and Mullainathan 2004; Pager, Western, and Bonikowski 2009), economists have proposed modifications to the theory that help to explain the failure of competitive pressures to weed out discriminatory employers. Segregated networks, imperfect information, search frictions, and replacement costs, for example, each may interfere with market competition and the weeding out of inefficiencies, including discrimination (Arrow 1973:20-26; Charles and Guryan 2008). Alternatively, theories of statistical discrimination contend that, at the group level, race may provide meaningful information about productivity, and therefore, race-based decision-making may be consistent with competitive markets (Phelps 1972; Aigner and Cain 1977).

At the same time, while few contend that discrimination has been eliminated, there is good evidence that the degree of discrimination in labor markets has diminished over time (Wilson 1978; Hanssen and Andersen, 1999). Secular changes in the incidence and prevalence of discrimination have been credited to changes in employment law (Heckman and Payner 1989; Kaley and Dobbin 2006) and the liberalization of racial attitudes (Schuman et al. 1997). Do competitive pressures also play a role? Some research has attempted to answer this question by examining wage disparities over the business cycle (Biddle and Hamermesh 2012; Ashenfelter 1970; O'Neill 1985) or in the aftermath of industry deregulation (Black and Strahan 2001; Peoples and Saunders 1993), with the expectation that disadvantaged workers should fare better as competition increases and alternatives become more scarce or costly (Fernandez and Campero 2015; though see Ederington and Sandford 2012).¹ But because many factors influence relative wage rates—including both compositional and structural factors, each of which may shift as labor markets tighten or weaken—it is difficult to pinpoint discrimination as an underlying mechanism in these analyses. Further, the focus on relative wages tells us little about the costliness of discrimination for employers.

One study looks more directly at the question of firm profitability in the context of sex discrimination (Hellerstein, Neumark, and Troske 2002). Using cross-sectional data on manufacturing plants and their workers, the authors find that plants that employ a higher proportion of women are more profitable, consistent with the idea that nondiscriminatory employers benefit from their willingness to hire (less expensive) female workers. This relationship is particularly strong among plants with market power, where discrimination has not been driven down by competitive pressures. Though the cross-sectional estimates are not supported by longitudinal patterns of plant growth or ownership change, the five-year window of observation may not have been adequately long to observe the impact of market pressures. The

Hellerstein et al. study represents the most direct test of Becker's theory to date; and yet, here too evidence of discrimination is indirect, inferred from the prevailing gender wage gap and the proportion of women employed. Compositional differences among plants and/or firms and productivity differences between men and women could each influence the association between gender composition and plant profitability. In the present study, by contrast, we exploit direct measures of hiring discrimination in our analysis of firm survival, representing a significant advance over existing research.

Data and Methods

This study builds on the findings of an experimental audit study of racial discrimination in employment conducted in New York City in 2004 (Pager et al. 2009). In this study, teams of young men were hired to play the role of job seekers. These young men were carefully selected and matched on the basis of their age, physical appearance, and interpersonal skills, and were assigned matched fictitious resumes that reflected identical levels of education and work experience. Teams of three men—including a black, white, and Latino applicant—applied in person for jobs at 170 businesses over the course of 12 months (see online supplement, Appendix A for additional methodological details). The results of this study indicated substantial amounts of hiring discrimination. Whites received callbacks or job offers in 31 percent of all cases, Latinos in 25 percent of all cases, and blacks in just 15 percent of cases. The rates of positive responses for whites and Latinos were not significantly different from one another, but both were significantly different from that of blacks. That Latinos and whites received offers of callbacks at 1.7 to 2 times the rate of equally qualified blacks suggests that direct racial discrimination continues to represent an important source of inequality in contemporary labor markets.

The financial crisis of 2008 represented a significant shock to the labor market of New York City, as to the rest of the country. During this time, a record number of businesses folded (American Bankruptcy Institute 2012).² Given the significant weeding that took place, this represents an ideal time to examine the survival of firms from the earlier study. In particular, the financial crisis created two conditions that bring the relationship of interest into sharp relief: first, economists have referred to the "cleansing effect of recessions" (Caballero and Hammour 1994), with economic downturns heightening the costs of inefficient practices. Businesses that may have been able to survive under normal circumstances are met with the full force of market discipline during recessionary times.³ Second, the sheer number of business closures that took place during this period offers increased statistical power with which to detect patterns that otherwise may be difficult to observe. For each of these reasons, the recent recession offers an opportune moment during which to examine the relationship between discrimination and firm survival.

Using records from ReferenceUSA, a large national database of business establishments, we matched each of the employers from the 2004 study to archived records from this database from that same year.⁴ Four employers were dropped because of incomplete name or address information. Of the remaining 166 employers, 84 percent were identified in the 2004 database. Some cases of unmatched

employers were very small businesses (e.g., sole proprietors) or seasonal businesses (e.g., campaign workers). Others may have had inaccurate or incomplete employer names or addresses (based on job ads or testers' records). Unmatched employers were not significantly different in their incidence of discrimination relative to the matched sample from 2004, suggesting that missing data will not systematically affect the pattern of results (see Table B2, model 2 in the online supplement).

The 139 employers located in the 2004 ReferenceUSA database represent the basis for the current investigation. Each record was linked to the more recent ReferenceUSA entries from 2010. Business establishments that no longer appear by 2010 are coded as "out of business."⁵ Based on this measure, roughly 22 percent of the establishments in our sample failed during this six-year window.

Results

Because the initial audit study indicated no significant difference between white and Latino applicants—but significant differences between both groups compared to blacks—our key measure of discrimination focuses on this black–nonblack contrast. According to this indicator, 24 percent (33/139) of employers showed evidence of discrimination. Substantive results are similar when a black–white contrast is used, but levels of precision are reduced.

Figure 1 presents the percent of establishments no longer in business in 2010 by their history of discrimination (measured in 2004). Here, we see that 17 percent of nondiscriminatory establishments had failed by 2010, relative to 36 percent of those that did discriminate. The likelihood of going out of business for an employer who discriminated thus appears more than twice that of its nondiscriminating counterpart ($p < 0.05$).

Overall, then, there appears to be a strong and significant association between discrimination and firm survival. Though sample sizes in this study are quite small, the disparities in survival rates among those who did and did not show evidence of discrimination suggest a robust relationship between the two.

How Do Firm Characteristics Affect the Relationship between Discrimination and Survival?

The bivariate association between discrimination and establishment survival is compelling, but we must consider the possibility that other firm characteristics may account for this relationship. In this section, we consider the influence of establishment size, sales assets, and industry (see Table 1).⁶ An obvious characteristic that may affect both the likelihood of discrimination and the likelihood of business failure is establishment size. If smaller employers are both more likely to discriminate and also more vulnerable to economic shocks, then the relationship between discrimination and firm survival may be spurious. We assess this proposition using data on establishment size (number of employees) from the ReferenceUSA database from 2004. As expected, small firms are more likely to go out of business than larger ones. The mean size of establishments in our sample that remained in business between 2004 and 2010 was 33 employees compared to a mean size of 24 among

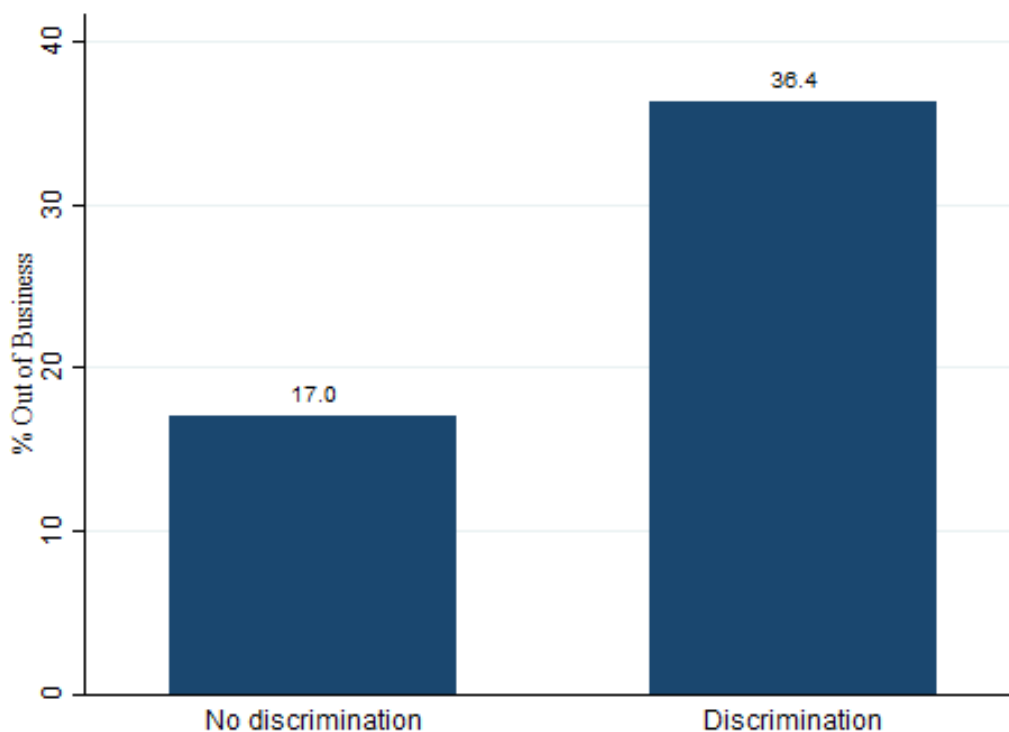


Figure 1: Percent of employers no longer in business in 2010 by evidence of discrimination in 2004.

those who closed down during that period.⁷ And yet, despite this substantial mean difference, establishment size does not appear to mediate the relationship between discrimination and business failure. Model 2 presents the results from a logistic regression model predicting business failure in 2010 as a function of discrimination and establishment size in 2004 (establishment size is logged to account for skew). The models show a strong relationship between the former two variables that is altered only slightly by the addition of establishment size. It does not appear, then, that the observed relationship between hiring discrimination and business failure is simply the spurious result of establishment size.⁸

In addition to the number of employees at a given establishment, we also examine the estimated sales assets of each location in our sample. Like establishment size, we see a clear bivariate relationship between establishment assets and survival. Those still in business in 2010 had mean sales assets of 4.4 million in 2004, relative to 3.7 million among those who were missing by 2010. Similar to establishment size, however, this relationship is not statistically significant and does little to mediate the relationship between our measure of discrimination and firm survival (see model 3). In fact, the coefficient on discrimination increases modestly with the addition of the assets measure, but this is largely because of missing data on that measure. Overall, like establishment size, these models point to a trivial impact of establishment assets in mediating in the relationship between discrimination and business survival.

Table 1: Prior discrimination, establishment characteristics, and the odds of going out of business.

	Model 1	Model 2	Model 3	Model 4	Model 5
Prior Discrimination	2.79† (1.24)	2.88† (1.32)	3.32† (1.60)	2.88† (1.35)	2.94† (1.47)
Establishment Size (# employees), logged		0.68* (0.13)			1.13 (0.40)
Establishment Sales Assets (millions), logged			0.72* (0.13)		0.58 (0.20)
Industry (retail trade = omitted category)					
Manufacturing				0.82 (0.95)	1.36 (1.68)
Transportation & communications				0.52 (0.59)	0.72 (0.86)
Wholesale trade				1.11 (0.88)	4.67 (5.76)
services (with finance, insurance, & real estate)				1.17 (0.60)	1.52 (0.94)
N	139	137	129	138	129

* $p < 0.1$, † $p < 0.05$, two-tailed tests;

Coefficients presented are odds ratios from a logistic regression predicting establishment failure.

Finally, we consider industry as a source of variation that may be related to both discrimination and survival. Industries are subject to specific regulations, standards, and practices, each of which can affect patterns of hiring. Industries also vary in the degree of competition they face, with some more vulnerable to economic shocks. This feature of organizations may thus play an important role in both the incidence of discrimination and the likelihood of firm survival.

We have industry information on all 138 of our firms from 2004, which we classify into six major industrial groupings: manufacturing; transportation and communications; wholesale trade; retail trade; finance, insurance, and real estate; and services. Because only two firms were in the “finance, insurance, and real estate” industry, we combine this group with “services.”⁹

Firms display substantial differences in survival rates by industry. Roughly 30 percent of the wholesale trade firms in our sample were out of business by 2010, as were 25 percent of firms in the services industry. By contrast, only 12.5 percent of firms in transportation and communications went out of business during our window of observation. At the same time, these differences do not appear to account for the relationship between discrimination and establishment survival. Model 4 presents results from a logistic regression model predicting failure as a function of the establishment’s history of discrimination and its industry. The addition of industry controls does little to mediate the association between discrimination and business failure.¹⁰

Because of our small sample size, the above analyses have been executed with each variable entered separately, but even if entered simultaneously, the variables

continue to show a strong positive coefficient on discrimination, while other variables in the model have little effect (see model 5). Overall, then, we find little mediating effect of these three key establishment characteristics—size, assets, and industry—on the relationship between discrimination and firm survival.

What Does the Relationship between Discrimination and Business Failure Represent?

According to Becker's original formulation, discrimination is costly to employers because it prioritizes characteristics of workers that are irrelevant to productivity. In a competitive context, these employers should be at a disadvantage. Is this, then, what's driving the association we observe here? The present results are consistent with Becker's theory of discrimination, although they do not allow us to draw specific conclusions about the mechanisms by which discriminatory decision-making is associated with firm survival. It is possible, for example, that the kinds of employers who discriminate against racial minorities are also those who make poor choices in other areas of business management. As one example, in interviews with employers about hiring practices, one of the most common expressions used to describe their hiring philosophy is a reliance on a "gut feeling" (Moss and Tilly 2003; Pager and Karafin 2009; see also Gladwell 2005). Employers who use intuition—rather than evidence, or more systematic forms of decision-making—may also be led astray in their capital investments, their financial management, and numerous other domains (Kahneman 2011). We cannot, therefore, conclude that it is directly because of the costs of discrimination that employers in our sample appear more likely to have been driven out of business. Rather, whether because of discrimination or other associated decision making, we can more confidently conclude that the kinds of employers who discriminate are those more likely to go out of business. Discrimination may or may not be a direct cause of business failure, but it seems to be a reliable indicator of failure to come.

Conclusion

This study represents the first to offer an empirical investigation of the relationship between hiring discrimination and firm survival using a direct measure of discrimination. Results suggest that firms that engaged in discrimination in 2004 were less likely to be in business six years later. The results appear robust to controls for establishment size, sales assets, and industry. Of course, there may be other characteristics related to both discrimination and business survival that cannot be measured here. Future research should gather a wider range of firm-level characteristics that could be meaningfully correlated with the relationship in question. Nevertheless, this research represents an important contribution to a literature dominated by theoretical propositions but short on empirical evidence. Associational support for Becker's theory of discrimination is found. Future research now has the task of uncovering how the costs of discrimination may correlate with other costly firm behaviors, and identifying the pathways through which these propensities ultimately shape firm survival.

Notes

- 1 A parallel literature focuses not on the costs of discrimination but rather the benefits of racial diversity. The findings of this literature are mixed, though some recent reviews support the conclusion that more diverse workteams lead to improved performance outcomes, particularly those related to creativity and problem solving (Watson, Kumar, and Michaelsen 1993; Page 2008; Scott, Heathcote, and Gruman 2011).
- 2 Between 2008 and 2012, roughly 38,000 businesses filed for bankruptcy, more than double the number from the preceding three years (<http://www.abi.org/newsroom/bankruptcy-statistics>).
- 3 Note: It is also possible that major recessions cause otherwise productive firms to close, which would weaken the association between inefficiencies (such as discrimination) and firm closure. The empirical evidence on this question is mixed (e.g., Foster, Grim, and Haltiwanger 2014), and future research testing the current research design during non-recessionary times would be instructive.
- 4 ReferenceUSA is a database of 14 million U.S. businesses. The database is updated monthly based on public records and direct phone calls for verification. The documentation for ReferenceUSA indicates that they rely on more than 5,000 public sources and place more than 26 million phone calls per year to verify and collect additional information (see <http://www.referenceusa.com/Static/DataQuality>). The reliability of commercial databases for use in academic research has been the subject of prior investigations (e.g., Neumark, Zhang, and Wall 2007). The ReferenceUSA database has been used in prior research on establishment survival (e.g., DiNardo and Lee 2002), and validation studies suggest high levels of agreement with field-based observations (Bader et al. 2009).
- 5 While ReferenceUSA does not have 100 percent coverage of all employers, once in the database, there are few reasons an employer would exit apart from business failure (personal communication with ReferenceUSA management). Web searches of a large fraction of the sample confirms this conclusion.
- 6 Appendix B in the online supplement presents a table of descriptive characteristics and a series of scatterplots examining the distribution of each of these characteristics according to firms' evidence of discrimination. Despite the small sample sizes, we see a fairly even spread of discriminatory and non-discriminatory employers across the range of establishment size, assets, and industry type.
- 7 Note: The number of employees here refers to the location in question (e.g., the establishment) rather than the total number of employees in a given company (e.g., the firm). It may be the case that firms with many locations have systematically different hiring practices—and survival rates—than those with only a single location. This may further depend on the degree of autonomy offered to local branches or franchises. Because both the propensity to discriminate and profitability is likely to vary across locations, we focus here on establishment-specific characteristics. Supplementary analysis including a flag for multilocation companies revealed similar results.
- 8 The coefficient on discrimination is slightly larger when two outliers are removed; statistical significance levels are unchanged (see Table B2, model 3 in the online supplement).
- 9 This information is primarily drawn from the 2004 ReferenceUSA archives. Where missing ($n = 10$), supplemental information was drawn from web searches of establishments. The majority of cases missing industry information were restaurants ($n = 8$), which belong to the retail trade industry.

¹⁰ Sixty-one percent of firms in this sample are classified as retail trade. Results hold when the analysis is limited to this industry, and the scope conditions of the study must take into account the disproportionate representation of retail sales in this sample.

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