

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF KENTUCKY
SOUTHERN DIVISION at LONDON

CIVIL ACTION NO. 6:01-CV-339-KKC

EQUAL EMPLOYMENT OPPORTUNITY COMMISSION, PLAINTIFF,

v.

OPINION AND ORDER

WAL-MART STORES, INC., DEFENDANT.

This matter is before the Court on various motions related to the EEOC's statistical evidence in this action: the EEOC's motion to exclude the testimony of Defendant's Expert, James Freeman (DE 344); Wal-Mart's motion to strike portions of the rebuttal report of the EEOC's statistical expert, Dr. Burt S. Barnow (DE 372); and Wal-Mart's motion to take 25 class member depositions if Dr. Barnow's rebuttal report is not stricken. .

I. Background.

In its Complaint, the United States Equal Employment Opportunity Commission (the "EEOC") asserts that, since at least January 1, 1998, Wal-Mart engaged in unlawful employment practices within Wal-Mart Distribution Center No. 6097 ("DC 6097) in violation of Section 703(a)(1) of Title VII, 42 U.S.C. 2000e-2(a)(1). (DE 1, Complaint, ¶ 7).

That statute prohibits an employer from failing or refusing to hire a woman or from otherwise discriminating against her because of her gender.

The EEOC brings this claim pursuant to Section 707 of Title VII, 42 U.S.C. § 2000e-6, which allows the federal government, through the EEOC, to bring a civil action directly against an employer charging systematic discrimination against a protected group.

In these cases, the government has to demonstrate that there exists “a pattern or practice of resistance to the full enjoyment of any of the rights secured by [Title VII]....” 42 U.S.C. § 2000e-6(a).

To do so, the EEOC must prove more than the “mere occurrence of isolated, ‘accidental’ or sporadic discriminatory acts.” *International Brotherhood of Teamsters v. United States*, 431 U.S. 324, 336 (1977). Rather, the EEOC must show that discrimination was the employer's “standard operating procedure” and “the regular rather than the unusual practice.” *Teamsters*, 431 U.S. 324, 336 (1977). *See also Cooper v. Federal Reserve Bank of Richmond*, 467 U.S. 867, 874-76(1984). Such an action focuses on whether there exists a “pattern of discriminatory decisionmaking.” *Cooper*, 467 U.S. at 876.

The plaintiffs may establish a prima facie case of pattern or practice disparate treatment by the use of statistics which show a gross disparity in the treatment of workers based on a protected characteristic. *Anderson v. Douglas & Lomason Co., Inc.*, 26 F.3d 1277, 1285 (5th Cir.1994). The plaintiffs may bolster their case by introducing historical, individual, or circumstantial evidence. *Id.* The employer may then rebut the plaintiffs' prima facie case by showing that the plaintiffs' statistics are inaccurate or insignificant, or by providing a nondiscriminatory explanation for the apparent discrimination. *Id.*

If the employer fails to rebut the government's prima facie case, the resulting finding of a discriminatory pattern or practice gives rise to an inference that all employees subject to the policy were its victims and are entitled to appropriate remedies. *See Teamsters*, 431 U.S. at 362.

By Court order dated July 24, 2006 (DE 88), the EEOC was directed to disclose its statistical expert's report; Wal-Mart was directed to file its statistical expert report some four months later; and the EEOC was directed to then file a rebuttal report. Those deadlines were extended multiple times.

The EEOC proffered Dr. Burt S. Barnow as its statistical expert. Specifically, Dr. Barnow was hired to analyze data on hiring by Wal-Mart from January 1, 1998 to present to determine if there is a statistically significant disparity in hiring by sex at DC 6097 after controlling for relevant factors. The data included 25,000 applicant files and hundreds of thousands of pages.

In his report, Dr. Barnow states that the statistical approach he used “to control for factors that might affect hiring decisions is logit analysis, sometimes referred to as logistic regression analysis.” (DE 359 at 13). Dr. Barnow concludes that:

After controlling for relevant variables available in the application, I conclude that the probability a woman will receive a job offer is less than the probability an identically qualified man will receive an offer in [the 1998-2001 and 2002-04 time periods]; the estimated disparities are highly statistically significan[t], substantially exceeding the standards required for evidence in cases of this nature and are thus very unlikely to have arisen by chance alone.

Wal-Mart designated James Freeman as its expert to respond to Dr. Barnow’s report. Freeman criticizes the manner by which the database upon which Dr. Barnow relied was created. He also criticizes Dr. Barnow’s statistical model because it is unable to accurately predict which applicants will be hired at DC 6097. Freeman conducted a random sample of 425 applicant files and points out discrepancies between his random sample and the database upon which Dr. Barnow relied.

Dr. Barnow then filed a rebuttal report. Dr. Barnow’s rebuttal report states that “some of Mr. Freeman’s assertions regarding errors are correct, and some are not.” Dr. Barnow made certain corrections in the database. He states that he then reran his statistical analysis after making the appropriate corrections and arrives at the same conclusion: “The rate at which men received offers from Wal-Mart is higher than the rate for women when one controls on variables available, and the disparity is statistically significant for the 1998-2001 and 2002-2004 periods.”

Dr. Barnow also states that he performed a statistical analysis on the sample database created by Freeman and found a statistically significant disparity in offers by gender.

Wal-Mart moved to exclude Dr. Barnow's testimony and the EEOC moved to exclude Freeman's testimony. Wal-Mart also moves to strike Dr. Barnow's rebuttal report. By prior order, this Court determined that Dr. Barnow was qualified, that his testimony was sufficiently reliable to present to a jury, and that his testimony was relevant to this action.

The Court now addresses the EEOC's motion to exclude Freeman's testimony and Wal-Mart's motion to strike Dr. Barnow's rebuttal.

II. The EEOC's Motion to Exclude Freeman's Testimony (DE 344).

The EEOC moves to exclude Freeman's testimony. The Court conducted a hearing on the motion at which Freeman testified and counsel presented arguments.

Rule 702 of the Federal Rules of Evidence provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

In *Daubert v. Merrell Dow Pharmaceuticals Inc.*, 509 U.S. 579 (1993) and *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137 (1999), the Court clarified that expert testimony is admissible only if it is both relevant and reliable. *Daubert*, 526 U.S. at 589; *Kumho Tire*, 526 U.S. at 147.

As to reliability, a witness must first establish that he is qualified on the basis of "knowledge, skill, experience, training, or education." *Pride v. BIC Corp.*, 218 F.3d 566, 577 (6th Cir. 2000)(citing

Fed. R. Evid. 702). The Court then must “determine whether the principles and methodology underlying the testimony itself are valid.” *Id.* The Court is not to “second guess the validity of conclusions generated by otherwise valid methods, principles, and reasoning.” *Id.*

As to relevancy, “[t]his requirement has been interpreted to mean that scientific testimony must ‘fit’ the facts of the case, that is, there must be a connection between the scientific research or test result being offered and the disputed factual issues in the case in which the expert will testify.” *Id.* at. 578.

The party proffering the expert testimony must prove its reliability and relevancy by a preponderance of the evidence. *Id.*

A. Qualifications.

The EEOC argues that Freeman is not qualified to offer an opinion on database construction because he has no education, training or experience in data entry, database construction or database design. The EEOC also argues that Freeman cannot opine on Dr. Barnow’s statistical model because his experience in statistics consists of one course Freeman took as an undergraduate.

As to Freeman’s experience in database construction, at the hearing on this matter and in his deposition, Freeman explained that he had created or assisted in the creation of large-scale databases regarding employee or applicant data in at least six cases. The first of these occurred in the 1980s. He also testified that he had done statistical analysis in prior cases, some of which involved the same kind of statistical analysis as is at issue in this action. Freeman testified that, while employed by the state of South Carolina, he “constantly” did regression analyses.

Given this experience, the Court finds Freeman qualified to testify regarding the construction of the database upon which Dr. Barnow relied and Dr. Barnow’s statistical model.

B. Reliability and Relevance.

The EEOC argues that Freeman acts essentially as an advocate instead of an expert and, thus, his opinion is not reliable. Here, the EEOC focuses on primarily two aspects of Freeman's opinion: first, that he did not opine on the ultimate issue of whether there was a statistically significant disparity in hiring by gender at the distribution center and; second, he uses "lawyer math" to magnify the errors in the database upon which Dr. Barnow relied.

However, neither of these issues relates to the reliability of Freeman's opinion regarding the manner by which the database in this case was constructed, Dr. Barnow's statistical model, and the errors in the database. While Freeman's failure to determine whether there was any disparity in hiring by gender and his error rate calculation are certainly appropriate issues for cross examination, they do not require the exclusion of Freeman's testimony.

The EEOC argues that, in critiquing the database, Freeman refers either to no standards or to "statistical standards" without indicating which standards. The Court finds two references to "statistical standards" in Freeman's report. The report also includes a citation to the National Center for Education Statistics, Statistical Standards Program. All of these references are found on page 3 of Freeman's 37-page report. The EEOC argues that the NCE standards are inapplicable to the statistical model at issue in this case. However, the Court has found that Freeman has sufficient experience in statistical analysis to permit him to opine on Dr. Barnow's statistical model. He may also opine as to his understanding of "statistical standards" based upon his statistical experience.

To the extent that Freeman has no standards in mind or the standards he has in mind are inapplicable or inaccurate, then that is a prime area for cross examination. His references to

unidentified statistical standards do not require the exclusion of his testimony.

The EEOC argues that Freeman's opinion regarding database construction is irrelevant to this matter because he has not showed that creating the database in a difference manner would have made it more reliable or changed the statistically significant results found by Dr. Barnow. However, Wal-Mart is not required to demonstrate either of these things. Freeman's opinions regarding database construction are directly relevant to the statistical evidence presented by Dr. Barnow.

C. The EEOC's Objection to Particular Portions of Freeman's Testimony.

1. Differences between the Imam Database and the Final Database.

The EEOC argues that the Court should exclude Freeman's opinions regarding the differences between the initial database created in this matter and the final database upon which Dr. Barnow relied. To understand this argument, it is necessary to summarize the steps in the creation of the database upon which Dr. Barnow relied.

In its response to Wal-Mart's motion to exclude Dr. Barnow's testimony, the EEOC explained that Dr. Barnow's analysis began with raw applicant materials provided by Wal-Mart. The EEOC explained that, in response to the EEOC's discovery requests, Wal-Mart provided hundreds of thousands of pages of handwritten and "sometimes illegible and incomplete applicant materials." In his rebuttal report, Dr. Barnow stated that CompuPacific, a firm specializing in data entry, was hired to enter the data.

Dr. Barnow states that the EEOC then contracted with Dr. Ibrahim Imam, a Ph.D. in mathematics and a faculty member of the computer engineering and computer science department at the University of Louisville, to take the data prepared by CompuPacific and "place the data into a data management system for use in statistical analysis." Finally, according to Dr. Barnow, the

EEOC contracted with the Lewin Group to perform quality control on the data and to convert the data to a format for use in his statistical analysis. At the hearing on this matter, Dr. Barnow clarified that the Lewin Group was hired for the purpose of analyzing Dr. Imam's initial database for errors and to correct those errors.

Freeman's report contains a section in which he analyzes the difference between Dr. Imam's initial database and the database upon which Dr. Barnow ultimately relied in formulating his opinion. Freeman concludes that "there are. . . numerous instances where Dr. Imam's data was not correctly converted into the database actually used by Dr. Barnow . . . If Dr. Barnow's database does not accurately reflect the data collected by Dr. Imam, Dr. Barnow's database is per se unusable and cannot be relied upon."

The EEOC argues that any differences between Dr. Imam's database and the database upon which Dr. Barnow relied are irrelevant. The Court agrees. Dr. Barnow did not rely upon Dr. Imam's database in formulating his opinions. Dr. Imam's database was simply one step in the creation of the database. The relevant database is the one upon which Dr. Barnow relied and the relevant discrepancies are any that exist between that database and the raw applicant material.

The EEOC specifically undertook corrections to Dr. Imam's database as part of its quality control. Freeman concludes that any differences between Dr. Imam's database and the database upon which Dr. Barnow relied renders the final database unreliable. This conclusion would be confusing and more prejudicial than probative. Furthermore, because Dr. Barnow did not rely on Dr. Imam's database, any differences between that database and the database upon which he did rely are irrelevant.

Accordingly, the Court will grant the EEOC's motion to exclude this portion of Freeman's

proposed testimony.

2. Coding Decisions.

The EEOC also requests the Court to exclude Freeman's opinion that yes/no coding and other coding decisions made in creating the final database potentially increases the error rate of the database. However, the Court has determined that Freeman is qualified to opine regarding the creation of databases such as the database at issue in this case. Accordingly, the Court will not exclude this portion of Freeman's testimony.

3. Errors in the Database.

The EEOC also asks the Court to exclude Freeman's opinions regarding specific errors in the database, i.e., application date; applicant education level; and offer status; and applicants hired who were under 18; without a legal work permit; who applied for white collar jobs; and who had negative references; a felony conviction; or a theft/fraud conviction.

Again, however, the Court has determined that Freeman is qualified to opine regarding the construction of the database and regarding the statistical analysis based on the database. Accordingly, he may testify regarding errors in the database. Further, any such errors are relevant to the reliability of the database and Dr. Barnow's opinion. This is true regardless of any corrections made by Dr. Barnow in his rebuttal report.

Further, Dr. Barnow agreed with at least some of Freeman's asserted errors. These errors must be presented to the jury. Thus, the Court will not exclude Freeman's testimony about these errors. If Freeman has incorrectly identified other errors in the database, then that fact may be demonstrated through cross-examination or other testimony. Likewise, if any errors identified by Freeman have no effect on Dr. Barnow's conclusions, then that fact may be demonstrated through

cross-examination and Dr. Barnow's testimony.

4. Errors in Class Member Identification.

The EEOC also asks the Court to exclude Freeman's opinions regarding class membership. The EEOC argues that Freeman sets forth rules for class membership but fails to test via regression analysis whether any new rules are supported statistically. On the other hand, the EEOC also argues that portions of Freeman's opinions regarding class membership can be easily understood without an expert at all.

The Court notes again that Dr. Barnow agreed with at least some of Freeman's asserted errors in the class membership list. These errors must be presented to the jury. Thus, the Court will not exclude his testimony about these errors. If Freeman is incorrect regarding his opinion on other particular class members, then that fact may be demonstrated through cross-examination and Dr. Barnow's testimony.

5. Evidence of Freeman's Sample Database.

The EEOC asks the Court to exclude evidence of the sample database of 425 applications created by Freeman. It argues that the database is not reliable, stating "it is clear that Freeman did not use well accepted methodology in selecting his sample size." However, the EEOC does not present evidence of that well-accepted methodology. While Wal-Mart may have the burden of proving the reliability of its experts, the EEOC must present some evidence that puts that reliability into question. The EEOC has not done so with regard to Freeman's sample database.

Again, any errors in the construction of Freeman's database can be presented to the jury but the EEOC has presented no reason that the Court should exclude evidence of the database in its entirety.

6. Freeman's Opinion Regarding Barnow's Statistical Model.

The EEOC argues that the Court should preclude Freeman from opining on the "R-squared" value of Dr. Barnow's statistical model.

Freeman opines that "Dr. Barnow's reports do a very poor job of predicting which applicants will be hired, and that is the entire purpose for developing a model." In statistical terms, this means Dr. Barnow's model has a low "R-squared value." Freeman further opines that Dr. Barnow's low R-squared value may be because Wal-Mart's hiring process is "essentially random" but also states it may indicate that Dr. Barnow's statistical model is inappropriate or that the data is incorrect or being used for an unintended purpose.

Dr. Barnow, on the other hand, argues that "there are numerous econometrics books that warn against relying on R squared. . . for making statistical inferences or judging the suitability of a particular model."

The Court has no way of determining which of the experts is correct regarding the use of the R-Squared value in this case. Accordingly, both experts should be permitted to present their opinions on this issue to the jury.

III. Wal-Mart's Motion To Strike Portions of Dr. Barnow's Rebuttal (DE 372).

Wal-Mart moves to strike portions of Dr. Barnow's rebuttal report, arguing that those portions exceed the proper scope of rebuttal.

Again, in his initial report, Dr. Barnow concluded that, for the relevant time periods, the probability a woman would receive a job offer was less than the probability an identically qualified man would receive an offer; the disparities are highly statistically significant, and very unlikely to have arisen by chance alone.

Freeman then issued his report responding to Dr. Barnow in which he found certain errors in the database relied upon by Dr. Barnow. In his rebuttal, Dr. Barnow agreed with some of Freeman's asserted errors, disagreed with some, made some corrections to his database, and reran the statistical analysis, arriving at the same conclusion regarding a statistical disparity in hiring.

Wal-Mart now moves to strike portions of the rebuttal, arguing that, when Dr. Barnow made corrections to his data and class list in response to Freeman's report, he essentially created new data. Again, pursuant to an order entered as long ago as July 2006 the parties understood that the EEOC would proffer a primary statistical expert; Wal-Mart would retain an expert to respond; and the EEOC's statistical expert would issue a rebuttal.

It cannot be unexpected that a statistical rebuttal would analyze Freeman's asserted errors and result in some corrections to data. Nor can it be unexpected that the statistical rebuttal would include a rerunning of the statistical analysis to determine if the asserted errors were statistically significant. Accordingly, this is not a case of "sandbagging" as Wal-Mart asserts.

Furthermore, the Court has ruled relevant and reliable Freeman's testimony regarding errors in the database and the class list contained in Dr. Barnow's initial report. In order to present all relevant and reliable information to the jury on this issue, and because the parties envisioned a rebuttal report at all times, the Court will permit Dr. Barnow to testify regarding his opinion of Freeman's asserted errors.

IV. Wal-Mart's Motion for 25 Class Member Depositions if Rebuttal Report is not Stricken (DE 356).

Dr. Barnow's revised class list contained in his rebuttal report eliminated 122 of the approximately 4,000 class members he had included in his initial report. Among these 122 class

members were 25 female applicants who Wal-Mart deposed as part of the 120-class member depositions allowed it by Court. Wal-Mart now moves to take 25 more class member depositions.

In its Reply brief, Wal-Mart states that it took class member depositions “precisely to demonstrate the inaccuracy and lack of probative force in the EEOC’s statistical proof.” (DE 380 at 6). It argues that the fact that members were removed from Dr. Barnow’s initial class list itself “illustrates the unreliability of Barnow’s 2007 report and class identification.” (DE 380 at 5). In other words, Dr. Barnow’s concession that certain class members should be removed from the class list is precisely the kind of evidence that Wal-Mart sought with its class-member depositions. The Court fails to see how Wal-Mart is prejudiced by that concession.

Wal-Mart had sufficient opportunity to develop additional evidence through 95 depositions. There is no reason for 15 additional class-member depositions.

V. CONCLUSION.

For all these reasons, the Court hereby ORDERS as follows:

- 1) The EEOC’s Motion to Exclude Freeman’s Testimony (DE 344) is GRANTED in part and DENIED in part. The motion is GRANTED as to Freeman’s testimony regarding differences between Dr. Imam’s database and database upon which Dr. Barnow relied and Freeman’s testimony on this issue is EXCLUDED. The motion is otherwise DENIED; and
- 2) Wal-Mart’s Motion To Strike Portions of Dr. Barnow’s Rebuttal (DE 372) and Wal-Mart’s Motion for 25 Class Member Depositions if Rebuttal Report not Stricken (DE 356) are DENIED.

Dated this 16th day of February, 2010.



Signed By:

Karen K. Caldwell *KKC*

United States District Judge