

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

**CHICAGO TEACHERS UNION, LOCAL 1,
AMERICAN FEDERATION OF TEACHERS,
AFL-CIO; DONALD L. GARRETT JR.;**
ROBERT GREEN and VIVONELL BROWN, JR.,
individually and on behalf of all similarly situated
persons,

Plaintiffs,

v.

**BOARD OF EDUCATION OF THE CITY OF
CHICAGO**

Defendant

**Case No. 12 C 10311
Judge Sarah Ellis
Magistrate Judge Young Kim**

SUPPLEMENTAL F.R.C.P. RULE 26(a)(2)(B) REPORT OF JONATHAN WALKER

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I. INTRODUCTION, QUALIFICATIONS AND ASSIGNMENT

1. I am an economist. Labor economics is one of my areas of expertise. I have a bachelor's degree in economics from the University of California at Berkeley and a doctorate in economics from the Massachusetts Institute of Technology. As part of my undergraduate and graduate training, I took advanced courses in statistics and econometrics, the use of statistical tools to measure economic phenomena. I prepared an expert report in this matter dated August 12, 2016. In that report, I discussed my educational and professional background and qualifications for this assignment. I attach a current version of my curriculum vitae as Appendix A to this report. Therein, I list all of the court cases in which I have testified. I also disclosed the materials I was relying on to form my opinions in this case. I disclose all of the additional materials I am relying upon for this new report explicitly in the text and footnotes.

2. My 2016 report assessed whether the turnaround policies that the Board implemented in 2011 (prior to the 2012 School Year) had a disparate impact on African-American employees of the Chicago Public School ("CPS") system. In that report I also reviewed and responded to the expert reports that Dr. David Blanchflower prepared on behalf of the Board of Education of the City of Chicago ("the Board"). Dr. Blanchflower has provided a new report, dated September 14, 2016, regarding the Board's pre-2012 turnaround decisions ("Blanchflower Pre-2012 Report"). Robin Potter & Associates, PC (now, Potter Bolanos LLC) retained me on behalf of the Chicago Teachers Union, Local 1 ("CTU") to assess whether the turnaround policies that the Board implemented prior to 2012 also had a disparate impact on African-American workers of the Chicago Public School system and to review and respond to the Blanchflower Pre-2012 Report.

3. Economists Incorporated ("EI") is being compensated for my work in this case at \$625 per hour. Other economists and research staff at EI have assisted me on this matter. EI is being compensated at the rate of \$275 to \$425 per hour for their time. Neither my compensation nor EI's compensation for work on this matter depends in any way on the outcome of the litigation.

II. SUMMARY OF OPINIONS

4. The CPS workforce is racially segregated. As a consequence, policies that affect only certain selected schools may potentially have disparate impact.

5. The Board's implementation of its turnaround policies in 2008, 2009 and 2010 did have disparate impact on African-American CTU members relative to white CTU members.¹ The Uniform Guidelines on Employee Selection Procedures, Part 1607.4 (D) of the U.S. Code of Federal Regulations state that a selection rate for one group that is less than 80% of the selection rate for the highest group shall generally be regarded as evidence of disparate impact. In the case at hand, depending on the year, selection rates for white CTU members were approximately 20% to 32% of the selection rates for African-American CTU members. African-American CTU members were roughly 3.2 times to 5.2 times as likely to be impacted by turnaround as white CTU members were. The disparate impact is statistically significant to an astronomical confidence level. These racial differences in outcomes are attributable to the segregated nature of the Chicago Public Schools ("CPS") and the disproportionate numbers of African-American CTU members employed at the particular schools that the Board selected for turnaround.

6. Although Dr. Blanchflower expresses the opinion that there is no statistically significant evidence of discrimination by the Board, his statistical results indicate otherwise. Dr. Blanchflower's analysis confirms that CPS is segregated and as a consequence African-American CTU members were disproportionately affected by the 2008-2010 turnarounds. Dr. Blanchflower's work shows that the percentage of African-American CTU members was well above the CPS average in the schools selected for turnaround while the percentage of white CTU members was well below the CPS average. Dr. Blanchflower also demonstrated that there were statistically significant racial disparities in the likelihood of receiving a termination notice and in the likelihood of being terminated (as Dr. Blanchflower uses the term) as a result of the turnarounds.² Dr. Blanchflower's opinion that there is no statistically significant evidence of discrimination is inconsistent with his own statistical findings in this regard.

7. Dr. Blanchflower found that there was no remaining, independent effect of race on CTU

¹ In my 2016 report I analyzed the impact of the 2012 turnarounds on 2012 employees and on 2012 CTU members. The pre-2012 data produced in discovery provides information for CTU members only and, as such, in this report I analyze the impact of the pre-2012 turnarounds on just CTU members. Throughout the remainder of this report, I use "workers" and CTU members interchangeably.

² Throughout this report "termination notice" means notice that the recipient's school was being turned around and that the recipient was being removed from his or her position pursuant to the Board's resolutions. For an example of a termination notice, see the June 30, 2012 notice sent to Donald Garrett, CBOE0012964. Also throughout this report, unless explicitly stated otherwise, "termination" shall mean having received a termination notice and not being employed by the CPS the following March according to Dr. Blanchflower.

members' likelihood of being permanently terminated after controlling for certain performance metrics for the schools they worked at. Dr. Blanchflower bases his opinion that there is no statistically significant evidence of discrimination (notwithstanding his own analyses showing that there were statistically significant disparities in receiving termination notices and in being terminated) on this "school performance / termination" finding. As a threshold matter, Dr. Blanchflower's reliance on this "school performance / termination" finding depends as much or more on his legal analysis as it does on any statistical or economic work. I have been advised that it is the CTU's position that receipt of a termination notice and associated displacement or removal from a position constitutes an actionable, adverse, employment event regardless of whether the employee was ultimately and permanently terminated³ and that this Court agreed.⁴ Accordingly, in his previous reports regarding the 2012 turnarounds, Dr. Blanchflower attempted to analyze whether race was correlated with being in a turnaround school and thus receiving a termination notice. Dr. Blanchflower's new analysis assumes that actionable, adverse impact could only occur if an employee received a termination notice and was not rehired or transferred into a new position by March of the following year.⁵ According to Dr. Blanchflower, receiving a termination notice is not enough for an adverse employment event to be actionable, nor are being transferred involuntarily, being demoted to part time status or being jobless for up to eight months. The determination about whether an adverse employment event is actionable is a matter of law, not statistics or economics. If Dr. Blanchflower's opinion is invalid that an employee must actually suffer a permanent job termination to have legal standing to bring an adverse impact claim related to the turnarounds, then much of his statistical work focusing on terminations rather than termination notices is irrelevant and his ultimate liability-related conclusions are baseless.

8. Even if his legal analysis is valid, Dr. Blanchflower's conclusions do not follow. Dr. Blanchflower's statistical results do not refute the existence of disparate impact even by his own definition of an actionable, adverse employment event. By Dr. Blanchflower's own calculations, there were statistically significant differences between white workers' and African-American

³ Joint Statement Pursuant to This Court's Order of September 4, 2015, filed September 30, 2015.

⁴ Notification of docket entry in this case dated December 9, 2015.

⁵ "In order to determine who was terminated I examined whether an individual who received a layoff notice from a turnaround school was listed on the spreadsheet listing employees in schools on March 1st in the year following the turnaround . . ." Blanchflower Pre-2012 Report, p. 33.

workers' likelihood of being terminated as a result of the turnaround process.⁶ Having proven disparate impact, Dr. Blanchflower seeks to excuse it because the disparate impact is supposedly due to correlation between the racial composition of schools' workforces and various school performance measures. This excuse is inadequate. Even if the disparate impact was wholly attributable to the Board having selected turnaround schools based on school performance measures, the disparate impact still exists. I understand that disparate impact theory presupposes that a challenged policy or practice may appear to be race neutral but that such a policy may nonetheless be discriminatory if it impacts a protected demographic group disproportionately and is not necessary for legitimate business purposes. Making employment decisions based on factors that are correlated with race rather than making them based on race directly may be discriminatory, just as a travel ban targeting Muslim-dominated countries may discriminate based on religion without explicitly banning Muslims.

9. Dr. Blanchflower's analyses also fail to establish that turnarounds were the least discriminatory means to achieve a legitimate business purposes or that turnarounds furthered any legitimate business purpose at all. Even if the disparate impact that the turnarounds caused were due to the Board selecting schools based solely on school performance, Dr. Blanchflower presents no reliable evidence that the turnarounds improved school performance or that performance improvements required adverse impact. Under these circumstances, Dr. Blanchflower's statistical models are inadequate to support his conclusion that **“there is no statistically significant evidence of a pattern of discrimination by the Board against African-American CTU members in the 2008 – 2010 turnarounds . . . None.”**⁷ (Emphasis in original.)

III. FACTUAL BACKGROUND AND RELEVANT ALLEGATIONS

10. Turnaround, also known as reconstitution, is a process in which a governing authority, here the Board, removes and replaces all administrators, faculty and staff from a school, and relieves the local school council of certain duties. After turnaround, “the Board either contracts with a third party to operate the school, assigns the school to the Board's Office of School Improvement or turns it over to one of the nineteen geographic networks that make up the next

⁶ Blanchflower Pre-2012 Report, Table 4 (i), Table 5(i) and Table 6(i).

⁷ Blanchflower Pre-2012 Report, p. 45.

layer of leadership in the Chicago School Board system.”⁸ “The Illinois School Code provides that a school may be subject to turnaround if it has been on probation for at least one year and has failed to make adequate progress in correcting deficiencies.”⁹

11. In December 2007 the Board published a set of criteria for the eligibility of schools for turnaround. These were: i) probation history; ii) school is one of lowest performing in the district; iii) low performance is consistent over time; iv) low performance is consistent across subjects; v) students at the school are not catching up; vi) school is part of a cluster of other schools proposed for turnaround; and vii) turnaround is in the best interest of the students. In 2008, one high school and four elementary schools were turned around. A new set of guidelines was published by the Board in December 2008, which was identical to that in 2007 with the exception that a school being part of a cluster of other schools proposed for turnaround was no longer a factor. In 2009, one high school and three elementary schools were turned around. In December 2009 a new set of guidelines was once again published by the Board, which identified schools receiving less than 33.3% of the possible performance points as the only criteria for turnaround. In 2010, two high schools and three elementary schools were turned around.¹⁰

12. The CTU challenges the turnaround process under both a disparate impact and a disparate treatment theory. CTU says that the Board targeted schools with high concentrations of African-American workers for turnaround. Further, CTU argues that turnarounds do not serve any legitimate business purpose.

IV. DATA

13. The files that the Board maintains in the ordinary course of business were missing information regarding race for some employees and also some additional school-level information for certain schools. It is common for datasets to have incomplete information. If the data are missing for unknown but likely benign reasons, an acceptable research strategy is simply to ignore the observations for which there are incomplete data and conduct the analysis on the remaining observations.¹¹ However, Dr. Blanchflower sought to fill in the missing information

⁸ Opinion of the Seventh Circuit of the U.S. Court of Appeals Reversing the District Court Finding Against Class Certification, August 7, 2015, p.2.

⁹ Ibid.

¹⁰ Complaint, p. 14.

¹¹ William H. Green, *Econometric Analysis*, Fourth Edition, New Jersey: Prentice-Hall, 2000, p. 259.

from a variety of outside sources.¹² I have no opinion about the accuracy of Dr. Blanchflower's supplements to the Board's business records. However, to minimize unnecessary argument, I have relied upon Dr. Blanchflower's datasets for my own analysis (CBOE0035272.dta, CBOE0035277.dta, and CBOE0035255.dta).

14. To confirm that the disparate impact findings are qualitatively the same whether the analysis is based on the Board's business records or the datasets that Dr. Blanchflower constructed, I report results based on the Board's business records in Appendix B of this report. The Board's normal business records include CBOE0026471.xls, CBOE0026472.xls, and CBOE0026469.xls, which are the 2008, 2009 and 2010 worker rosters, respectively. These datasets identify the CTU members (teachers and paraprofessionals) employed by CPS as of March 1st of each year, the schools to which they were assigned, and their race. Two other files (CBOE0026473.xls, CBOE0016505.xls) are CPS school datasets ranging from 2008-2013, which provide school level data for CPS high school and elementary schools including information on each school's performance metrics and probation status for each year. Finally, the CTU provided a file that contained school and department identification numbers and codes that were necessary to ultimately compile and combine the school-level data and data about teachers and paraprofessionals.

15. I understand that there are some inconsistencies between the turnaround schools identified by Dr. Blanchflower and those identified by the CTU.¹³ For purposes of this report I discuss the analyses using Dr. Blanchflower's identification of turnaround schools. However, I also performed the same analyses using the CTU's list of turnaround schools and my conclusions remained unchanged.

V. ADVERSE IMPACT

16. My first set of analyses show that the CPS system was highly segregated. If the school system was not segregated, a turnaround policy would be unlikely to have an adverse impact on any racially defined group of CTU members. If each school had similar percentages of African-American teachers, paraprofessionals and other types of workers, then it would be difficult or

¹² See Blanchflower Pre-2012 Report, pp. 3-35.

¹³ For 2008, Dr. Blanchflower did not include three schools identified by CTU as subject to turnaround: Excel-Orr, AAST-Orr High School, and Moses Vines Prep Academy.

impossible for African-Americans to have been disproportionately impacted due to the choice of which particular schools to turnaround. However, CPS schools differ dramatically in terms of racial composition of the workforce. Given the segregated nature of CPS schools, school specific policies may have disparate impact and the 2008 to 2010 turnarounds did have disparate impact.

17. Figures I-2008, I-2009 and I-2010 display bar charts for the years 2008 to 2010 respectively, dividing each year's total CPS schools in the discovery data into deciles based on percentage of CTU members who were African-American as of the time immediately prior to the relevant year's turnarounds. In Figure I-2008 chart, the furthest bar to the left represents the 59 schools with the lowest percentage of African-American CTU members. The furthest bar to the right represents the 57 schools with the highest percentage of African-American CTU members. The height of each bar represents the percentage of the relevant schools' CTU members who are African-American. If CPS schools were not highly segregated, there would be little difference in the heights of the bars, but that is not the case. For the lowest 10% of schools in 2008 in terms of percentage of CTU members who were African-American, only 2% of CTU members were African-American. For the highest 10% of schools in terms of percent of CTU members who were African-American, 82% of CTU members were African-American. Figures I-2009 and I-2010 show that similar segregation existed for the years 2009 and 2010.

18. Figures II-2008, II-2009 and II-2010 further illustrate segregation in the CPS in 2008 to 2010. To construct these Figures, I sorted schools based on absolute number of African-American CTU members working at the CPS schools. In each figure, the first bar represents information about the top 10% of schools in terms of number of African-American CTU members. The second bar represents information about the top 20% of schools in terms of African-American CTU members. The third bar represents information about the top 30% of schools in terms of African-American CTU members, etc. The height of each bar represents the percentage of all African-American CTU members throughout CPS who work at the relevant schools. Underneath each bar, I also report additional information about each group of schools. Generally speaking, Figures II-2008, II-2009 and II-2010 demonstrate that the CPS workforce was highly segregated.

19. For example, consider Figure II-2008. The first bar to the left shows that 31% of all African-American CTU members were employed at the 58 schools (10% of CPS schools) having the most African-American workers. At these 58 schools, 61% of CTU members were African-

American. The second bar from the left represents the top 116 schools in terms of number of African-American CTU members. These 116 schools represent 20% of all CPS schools, but they employed 49% of all African-American CTU members. The third bar from the left represents the top 174 schools in terms of number of African-American CTU members. These 174 schools represent 30% of all CPS schools, but they employed 64% of all African-American CTU members. Figures II-2009 and II-2010 reveal similar concentrations of African-American CTU members by school.

20. Looking at the rightmost bars on Figures II-2008, II-2009 and II-2010 offers another perspective on the segregated nature of the CPS. The second bar from the right on each Figure represents the top 90% of CPS schools in terms of the schools' number of African-American CTU members. In other words, the second bar from the right excludes the 10% of schools having the fewest African-American CTU members. Consider the second bar from the right in Figure II-2008. The top 90% of schools in terms of number of African-American CTU members accounted for almost 100% of the African-American CTU workers system wide. Equivalently, the bottom 10% of schools measured by number of African-American CTU members employed close to 0% of CPS's African-American CTU members. This was true in 2009 and 2010 as well.

21. The figures discussed above show that CPS schools were sufficiently segregated in 2008 through 2010 that selection of schools for turnaround could potentially have disparate impact. To see whether each year's turnaround actually had an adverse impact, I compared the rates at which African-Americans were impacted by turnarounds to the rates at which white workers were impacted by turnaround. Consistent with CTU's allegations in this case, I categorize a CTU member as impacted if he or she worked at a school that was subject to turnaround and thus received a termination notice. As discussed, CTU treats receipt of termination notice as impact regardless of whether the CTU member was ultimately rehired.

22. Figures III-2008, III-2009 and III-2010 report the racial composition of the CTU members at all probation-eligible CPS schools, all probation-eligible CPS elementary schools, all probation-eligible CPS high schools, and the individual schools chosen for turnaround in 2008, 2009 and 2010 respectively. I restrict my attention to probation-eligible schools because it is my understanding that the schools that are not probation-eligible are charter schools and other similar type schools over which the Board has less employment-related discretionary authority. The

Figures show that African-Americans comprised 31% of CTU members in probation eligible schools prior to the 2008 turnarounds. After the 2008 turnarounds, but prior to the 2009 turnarounds, African-Americans had declined to 30% of CTU members at probation eligible schools. After the 2009 turnarounds but prior to the 2010 turnarounds, African-American CTU membership had declined further to 29% of CTU members at probation eligible schools. While African-Americans made up 29% to 31% of the CTU members in all probation-eligible CPS schools prior to the turnarounds, the racial composition of the schools selected for turnaround was quite different.

23. The schools selected for turnaround employed African-Americans disproportionately. In fact, African-Americans constituted the majority of CTU members at turnaround schools. Across all five schools selected for 2008 turnaround, 62% of all CTU members were African-American. The African-American CTU membership percentage ranged from 50% to 69% at the individual schools selected for turnaround. Across all four schools selected for 2009 turnaround, 69% of all CTU members were African-American. The African-American CTU membership percentage ranged from 54% to 88% at the 2009 individual schools selected for turnaround. Across all five schools selected for 2010 turnaround, 65% of all CTU members were African-American. The African-American CTU membership percentage ranged from 52% to 79% at the 2010 individual schools selected for turnaround.

24. By contrast, white employment was especially low at schools selected for turnaround. White CTU members constituted 42% of all CTU members at CPS's probation-eligible schools in 2008, 2009 and 2010. However, white CTU members constituted only 27% of the CTU members at the schools selected for turnaround in 2008, 19% of the CTU members at the schools selected for turnaround in 2009, and 21% of the CTU members at the schools selected for turnaround in 2010.

25. Figure IV displays the racial composition of all 583 CPS schools as of 2008. Along the x-axis is the percentage of each school's CTU members that are African-American and along the y-axis is the percentage of each school's CTU members that are white. A school situated on the top left corner of the chart would indicate a large percentage of CTU members that are white and a relatively small percentage that are African-American. A school situated on the bottom right corner would indicate the converse; a school with a small percentage of CTU members that are white and

a relatively large percentage that are African-American. Identified in red are those schools that were selected for turnaround in 2008, 2009 or 2010. All non-turnaround schools are depicted in blue. Figure IV shows that, for all years, the Board consistently selected schools for turnaround that had particularly high African-American percentages and particularly low white percentages of the school's CTU members.

26. Figures III-2008, III-2009, III-2010 and IV show that the racial composition of a school was correlated with selection for turnaround. The question remains whether the racial differences are significant in both the practical and statistical senses of the word. The analysis summarized in Figure V addresses this question. Figure V reports selection rates for CTU members for all schools and for schools eligible for turnaround. Each turnaround year is represented by 2 rows on Figure V. The first row for each year concerns selection rates of CTU members by race from among CTU members at all CPS schools. The next row for each year shows the selection rates of CTU members rates by race from among CTU members employed at probation eligible schools. As I discuss, these selection rates indicate significant disparities in selection rates between African-American and white workers.

27. Figure V shows that 2008 to 2010 selection rates for African-American CTU members were always much higher than for white CTU members. Comparing African-American to white selection rates for all CTU members, regardless of whether they were domiciled at probation eligible schools, the white selection rate was roughly 32% of the African-American selection rate in 2008, 20% of the African-American selection rate in 2009 and 23% of the African-American selection rate in 2010. The differences between African-American and white selection rates were statistically significant to a virtual certainty. Based on t-tests comparing differences in means, the odds of each disparity occurring by chance were less than one in one trillion. Disparities were similarly large when the analysis was limited to CTU members working at the schools eligible for turnaround. As shown on Figure V, whether the analysis considers all CTU members as of the time of the turnarounds or just those CTU members working at probation-eligible schools, the white selection rate was always well below 80% of the African-American selection rate. The odds of each disparity were always less than one in one trillion regardless of year or whether the comparison was to all school-based CTU members or only those at probation-eligible schools.

28. Another way to show disparate impact is to conduct logit analysis to estimate the probability of being impacted by the turnaround process as a function of race. Logit analysis is a

way to estimate the amount, if any, by which being African-American increased the likelihood of being impacted by turnaround. Depending on the sample size, the variability in the underlying data and the magnitude of the effect of race on the probability of being impacted, the estimated race coefficient may be so large as to prove to a statistically significant degree of certainty that the chances of being affected by turnaround were higher for African-American CTU members. I include in my logit analysis controls for whether the school at issue is a high school and if the worker's position was that of a teacher. Dr. Blanchflower conducted analyses to estimate the difference in African-American workers' probability of being impacted compared to all other workers. However, my logit analyses estimate the difference in African-Americans' likelihood of being impacted by turnaround compared to white CTU members' likelihood only.¹⁴

29. I report the results of my analysis in Figure VI. As the figure shows, African-American status was a statistically significant factor influencing the probability of being impacted by the 2008, 2009 and 2010 turnarounds.¹⁵ The differences between African-American and white workers' probabilities of being impacted by the 2008, 2009 and 2010 turnarounds were all statistically significant at the 99% confidence level.

30. Logit coefficient estimates can be used to estimate odds ratios, the probability that an African-American CTU member would be impacted by a turnaround divided by the probability that a white CTU member would be impacted.¹⁶ For example, an odds ratio of 1.25 (or 125%) would mean that African-American CTU members' likelihood of being impacted by the turnarounds was 25% higher than similarly situated white CTU members' likelihood. In Figure VII, I show the odds ratios for the 2008 to 2010 logit regressions. In 2008, African-American CTU members were 221% more likely than white CTU members to receive termination notices as a result of a turnaround. In 2009, African-American CTU members were 415% more likely than

¹⁴ I compare African-American to white by including a variable in the logit analysis that is set to one if a person is some race other than African-American or white. This way the coefficient on the African-American variable estimates the incremental probability of being impacted relative to white workers only.

¹⁵ In Figure V I also report results after clustering the standard errors. This procedure has minimal effect on the estimated statistical significance of the coefficient estimates. Dr. Blanchflower clustered the standard errors in his Pre-2012 Report in Tables 4 to 6. Arguably, the adjustment should be made even though the logit regression that I run does not include school specific variables. I include the results with clustered standard errors to demonstrate that the result is the same whether the standard errors are clustered or not.

¹⁶ For a binary variable such as the African-American variables here, the odds ratio equals e^x where x is the estimated coefficient of the binary variable.

white CTU members to receive termination notices as a result of a turnaround. In 2010, African-American CTU members were 348% more likely to receive termination notices as a result of turnaround. These odd ratios all control for job-type (teacher versus paraprofessional) and school-type (high school versus other).

31. I also show the inverse of the odds ratios on Figure VII. The inverse indicates the probability of a white CTU member being impacted by the turnaround as a percentage of the probability of an African-American CTU member being impacted. In 2008, 2009 and 2010, white CTU members' probabilities of being impacted were 31%, 19%, and 22%, respectively, of African-American CTU members' probabilities. The selection probabilities for white CTU members were always less than 80% of the probabilities for African-American CTU members.

32. In summary, CPS schools were highly segregated as of the time of the turnarounds. I show this in Figures I-2008 through II-2010 as discussed above. Consequently, applying a school-based turnaround policy would have the potential to have adverse impact. The 2008 to 2010 turnarounds did have adverse impact on the CPS's African-American CTU members. Schools selected for turnaround employed disproportionately many African-American CTU members. I show this in Figures III and IV as discussed above. Viewed at the worker level, white CTU members were impacted by the turnarounds much less frequently than African-Americans as reflected in differences in selection rates between the racial groups. I show this in Figure V discussed above. Although it is traditional to report probabilities showing four or fewer significant digits, I have calculated the probability of disparities as large as we see here to a finer degree of precision. The probability that a race neutral process generated any year's disparity is less than one in a trillion. Applying logit analysis in the same way that Dr. Blanchflower did in his previous reports also indicates statistically significant racial disparities. I show this in Figure VI. The logit analysis indicated that African-Americans were several times more likely than white CTU members to receive turnaround-related termination notices after controlling for job-type and school-type. The probabilities of white workers being impacted by the turnarounds were approximately 19% to 31% of the probabilities that African-American workers would be impacted. I show this in Figure VII as discussed above.

VI. DR. BLANCHFLOWER'S ANALYSIS

33. Dr. Blanchflower's analyses are summarized in Tables 1 to 7 of his Pre-2012 Report. Based on those analyses, Dr. Blanchflower concluded that there was no statistically significant evidence that African-American CTU members were discriminated against by the Board's 2008, 2009 and 2010 turnaround policies and that the Board selected schools for turnaround based on performance metrics and not race. Notwithstanding his opinion that there was no statistically significant evidence of discrimination, Dr. Blanchflower's analysis actually confirms that there was statistically significant adverse impact on African-American workers. I understand that adverse impact is itself evidence of discrimination although it is not always conclusive evidence of such. As for his opinion that the Board did not consider race in making its turnaround selections, Dr. Blanchflower's analysis is incapable of disproving intentional discrimination because intentional discrimination can occur in situations where statistically significant disparities are eliminated after controlling for other factors. A travel ban provides a timely analogy. A travel ban that is explicitly based on country of origin rather than religion or race may still be intentionally discriminatory against Muslims (or any other religion). The entity enacting the ban may have selected countries based on the number of Muslims living there. If so, there would not necessarily be any statistical evidence of discrimination after controlling for country of origin even though the purpose and effect of the ban may be to discriminate on the basis of religion. It would be logically invalid to conclude based on a statistical analysis that controls for country of origin that the travel ban was not discriminatory or that any disparate impact was unintentional. Dr. Blanchflower makes the same logical error when he infers that his statistical work disproves discrimination by the Board. In fact, Dr. Blanchflower's analysis proves disparate impact and says nothing about disparate treatment. Below I review Dr. Blanchflower's Tables 1 to 7 and explain why each is either evidence of adverse impact or insufficient to disprove discrimination.

34. Dr. Blanchflower's Tables 1a and 1b display performance points and other performance measures over time for 2008 to 2010 turnaround schools. Dr. Blanchflower states that these tables indicate that school performance points and other performance measures generally improved for a turnaround school in its post-turnaround period. While the data may indicate that turnaround schools improved in certain dimensions, they do not show that turnarounds were necessary or beneficial in some way. Dr. Blanchflower did not conduct a controlled analysis showing that the turnaround schools improved any more than similar schools that were not selected for turnaround.

He reports no analysis demonstrating that apparent school performance improvements are statistically significant rather than being attributable to chance, and he reports no analysis to show that turnaround schools improved because they were turned around rather than improving due to higher budgets or due to some other change that could have been implemented without turnaround or disparate impact. In short, Dr. Blanchflower's analysis does not establish that turnarounds, and the concomitant disparate impact, were reasonably necessary to achieve any legitimate business purpose.

35. Dr. Blanchflower's Table 2 reports the results of probit regressions showing that being African-American is a statistically significant predictor of a CTU member being impacted by turnaround.¹⁷ "Probit" is a statistical technique used to estimate how or if probabilities of being categorized in one way or another (for example, terminated versus not terminated) are influenced by explanatory factors (for example, race). Dr. Blanchflower's Table 2 indicates that, in each year, African-Americans were more likely to be selected for turnaround and the difference in probabilities was statistically significant to an astronomical degree of confidence. This was true whether the analysis is for all schools or probationary schools only. As Dr. Blanchflower states "there is a strong and significantly positive impact of being an African-American on the prospects of a CTU member holding a position in a school being turned around and thus being potentially terminated."¹⁸

36. In Table 3 Dr. Blanchflower provides a summary of the various school performance characteristics that he states were part of the criteria used by the Board for determining which schools to turnaround. Dr. Blanchflower purportedly uses these various criteria as control variables in his regression analyses presented in Tables 4 through 7. Table 3 also provides each turnaround school's data for many of the performance measures. That turnaround schools rated low in various performance metrics does not disprove discrimination. Race, poverty and poor performance metrics may all be correlated. In that case, selecting schools for turnaround based on performance metrics may be analogous to selecting countries for a travel ban rather than selecting religion directly. This is discussed in greater detail below.

¹⁷ In his 2012 reports, Dr. Blanchflower also provided results of logit and ordinary least squares regressions. Dr. Blanchflower does not indicate why no such regression models are reported in his Pre-2012 Report.

¹⁸ Blanchflower Pre-2012 Report, p. 36.

37. Dr. Blanchflower's Tables 4, 5 and 6 display the results of probit regressions that estimate, for 2008, 2009, and 2010, respectively, the probability of a worker being "terminated."¹⁹ Panel (i) in each of these tables controls for working in a high school and being a teacher, in addition to being African-American. These regressions show that for each year in all schools combined being African-American was a statistically significant predictor of a worker being "terminated," as Dr. Blanchflower has defined the term for purposes of his analysis. Dr. Blanchflower repeated this regression separately for elementary schools and high schools and found that being African-American was still a statistically significant predictor of a worker being terminated in both categories of schools in all years, with the one exception of high schools in 2008. Harper was the only high school turned around in 2008. There were too few "terminations" (as Dr. Blanchflower has defined "terminations") to measure racial disparities related to that one school in isolation in a statistically precise way.

38. Dr. Blanchflower also shows the results in Tables 4 to 6 of numerous probit regressions estimating the impact of an individual being African-American on the likelihood of being selected for termination, after controlling for different school performance variables, such as attendance, years of probation, reading and math achievements, and performance points. For each of the relevant years, Dr. Blanchflower reports the results of numerous regression models, with each model controlling for an *ad hoc* collection of school performance metrics.

39. A significant problem with these regressions that purportedly control for the effect of school performance on CTU members' termination probabilities is that Dr. Blanchflower did not always use metrics that the Board relied upon to make its turnaround decisions.²⁰ For example, in Table 4 Dr. Blanchflower reports the results of regressions related to the 2008 turnarounds that control for attendance; yet, according to the Complaint, attendance is not cited by the Board as one of its published criteria for 2008 turnarounds. Similarly, the only metrics for 2010 turnarounds according to Dr. Blanchflower's Table 3 are 2008 and 2009 percentage of performance points, yet Dr. Blanchflower does not display results for a 2010 regression that uses only 2008 and 2009

¹⁹ Dr. Blanchflower seems to define a terminated CTU member as one who was employed by a turnaround school in a given year and whose employee identifier did not appear in his data file for the following year. (See Blanchflower Pre-2012 Report, pp. 9-10). For purposes of this report, I use the word "terminated" to identify CTU members who Dr. Blanchflower labeled as terminated within his own data.

²⁰ Complaint, pp. 13-14 and Blanchflower Pre-2012 Report, Table 3

performance points as the performance controls. Instead, Dr. Blanchflower's 2010 regressions as reported in Table 6 add in ISAT/PSAE 2009 performance as an additional control. Interestingly, if the regression is run using 2009 points as the only school performance control, they show a positive and statistically significant effect of race on a CTU member's likelihood of termination after controlling for school performance, apparently meeting Dr. Blanchflower's own definition of proof of discrimination.

40. As he did not limit his regression specifications for each turnaround year and school type to the variables that the Board purportedly considered, it seems that Dr. Blanchflower engaged in "data mining"—running alternative regression specifications on the same dataset in search of a specification that yields desirable results. When a regression specification is arrived at by data mining, the measures of statistical significance reported by statistical software packages are not reliable. This is because data mining uncovers correlations that may exist by chance.²¹

41. Even if Dr. Blanchflower's regression models were all statistically valid and not the result of data mining, the inferences he draws from his models' results are logically invalid. According to Dr. Blanchflower, the fact that being an African-American CTU member was statistically insignificant in some of his regression models after introducing various controls means "there is no statistically significant evidence of a pattern of discrimination by the Board against African-American CTU members in the 2008-2010 turnarounds."²² Dr. Blanchflower's models that control for school performance do not render the other statistical analyses that do not control for school performance nonexistent or irrelevant. Dr. Blanchflower's own analysis, as well as mine, shows that African-American CTU members were impacted disproportionately by the turnaround process, whether impacted is defined as receiving a termination notice or being terminated as Dr. Blanchflower has defined the term. Statistically significant disparities in the rate at which African-Americans were impacted by the turnaround process are by definition statistically significant evidence of a pattern and practice of discrimination. Even if the disparities were caused by

²¹ Michael C. Lovell, "Data Mining," *The Review of Economics and Statistics*, Vol. 65, No. 1 (1983): 1-21, at pp. 1- 2: "The majority of econometric textbooks discuss estimation and hypothesis testing procedures that are valid only when *a priori* considerations rather than exploratory data mining determine the set of explanatory variables to be included in the regression. When a data miner uncovers t-statistics that appear significant at the 0.05 level by running a large number of alternative regressions on the same body of data, the probability of a Type I error of rejecting the null hypothesis when it is true is much greater than the claimed 5%."

²² Blanchflower Pre-2012 Report, p. 45.

correlation between the racial composition of school workforces and school performance, the disparities would continue to exist. Of course, Dr. Blanchflower's analyses do not even explain reliably the cause for the disparities. As discussed above, it is possible that some of Dr. Blanchflower's results are attributable to data mining, running multiple statistical models on the same data to identify the model that best fits the predetermined theory. If Dr. Blanchflower did engage in data mining, his statistical significance tests are invalid. There is also the travel ban problem. Selecting schools for turnaround based on school performance can be the cause of intentional or unintentional discrimination if school performance metrics are correlated with race.

42. I have tested for correlation between the percentages of CPS schools' CTU members as of 2008, 2009 and 2010 that were African-American and the schools' various performance metrics that Dr. Blanchflower used in his regressions. I report the results in Figure VIII. A negative correlation indicates that the two variables move in opposite directions, and a positive correlation indicates that the two variables move in the same direction. In 2008, there was a statistically significant correlation between African-American CTU member representation and school performance based on six of the eight performance metrics Dr. Blanchflower used (Years Probation, Points 2008, Attend 2005-2007, EPA Read Gain, PSAE Reading 2007, and PSAE Math 2007). In 2009 and 2010 there was a statistically significant correlation between African-American CTU member representation and performance based on every metric that Dr. Blanchflower used (Years Probation, PSAE/ISAT scoring, Points 2008 and Points 2009).

43. I have also tested for correlation between the absolute numbers of African-American and white CTU members as of 2008, 2009 and 2010 and the schools' performance metrics. These correlations are displayed in Figure IX. In 2008, there was a statistically significant correlation between the number of African-American CTU members and school performance based on six of the eight performance metrics that Dr. Blanchflower used (Years Probation, Attend 2008-2007, Points 2008, Attend 2005-2007, EPA Read Gain, and PSAE Math 2007). In 2009 and 2010, there was a statistically significant correlation between African-American CTU members and each performance metric that Dr. Blanchflower used (Years Probation, PSAE/ISAT scoring, Points 2008 and Points 2009).

44. Figures VIII and IX together show that selecting turnaround schools based upon performance metrics could have a discriminatory effect. Since race and performance metrics are

correlated, the Board could engage in either intentional or unintentional discrimination by selecting schools for turnaround based on performance metrics without selecting based on race directly. In that case, race may be statistically insignificant in analyses that control for school performance even though disparate impact exists and may even be intentional.

45. Table 7 of Dr. Blanchflower's Pre-2012 Report summarizes results of probit regressions that are limited to CTU members working at schools that were on probation in each turnaround year. For each year, Dr. Blanchflower reports regression results without any school performance controls and then regression results after adding school performance controls. According to Dr. Blanchflower's Table 7, after controlling for schools' probationary status, there was no statistically significant difference between African-American CTU members' and other CTU members' probability of being terminated as a result of turnaround in 2008. Once again, this is an example of the travel ban problem. This result does not invalidate, respond to or refute Dr. Blanchflower's prior conclusion that race and turnaround were correlated. Table 7 indicates that, for 2009 and 2010, even after controlling for probationary status, African-American CTU members were more likely to be terminated as a result of turnaround than other CTU members were and the disparity was statistically significant.

46. Dr. Blanchflower's Table 7 also summarizes regression results that control for schools' 2008 performance points for the 2008 and 2009 turnarounds and 2009 performance points and 2009 ISAT/PSAE test results for the 2010 turnarounds. None of these regressions reflect the Board's purported criteria for selecting turnaround schools. According to Dr. Blanchflower's Table 3, the Board did not rely on 2008 performance points to select 2008 or 2009 turnaround schools. On the other hand, also according to Dr. Blanchflower's Table 3, 2008 performance points *was* a selection criterion for 2010, yet Dr. Blanchflower excludes this variable from his 2010 regression. Without explanation, Dr. Blanchflower included ISAT/PSAE 2009 test scores in that regression instead.

47. Dr. Blanchflower infers from the regression results on Table 7 that purportedly control for school performance that even when limiting the analysis to probationary schools, the Board "used school performance rather than race to determine which schools were turned around, and hence

which CTU members were displaced.”²³ Dr. Blanchflower’s regressions cannot logically support this conclusion. As an initial matter, none of the regressions on Table 7 analyze the school selection process. Rather, the analyses purport to measure the probability of individual CTU members being impacted by turnaround, not the probability of schools being impacted. The regressions simply do not address the relationship between race and school selection for turnaround. Second, Dr. Blanchflower’s results rely on “termination” as he has defined it as the only possible actionable, adverse employment event. Receiving a termination notice and being removed from a position may not be as deleterious as being permanently displaced from any further CPS employment at all, but it is still an adverse event. If the CTU is correct that it is also actionable, then Dr. Blanchflower’s Table 7 is irrelevant to liability because it presupposes the opposite. Third, according to Table 7 there *was* a statistically significant racial disparity in the probability of being “terminated” in 2009 and 2010 even when the analysis was limited to schools on probation and “terminated” was defined in Dr. Blanchflower’s narrow fashion. Adding school performance controls resulted in statistically insignificant race results, but that does not mean that there was no adverse impact. Rather, the results with school performance controls are consistent with (but not proof of) a possible explanation for the disparate impact, namely that the Board selected schools based on performance and that that selection process had disparate impact on African-American CTU members. Fourth, race and school performance were correlated. Consequently, statistically insignificant race results when school performance is controlled for do not rule out unintentional or intentional discrimination. This is true whether school performance is controlled for by probationary status alone or by probationary status along with other metrics. Finally, Dr. Blanchflower’s models appear to be the result of data mining. The controls he selected do not correspond to the criteria that he says the Board relied on. Analysis based on data mining does not generate reliable tests of statistical significance.

48. A recurring theme in all of Dr. Blanchflower’s work in this litigation has been to overstate the implications of statistically insignificant regression results. This error is present in his discussion of Table 7 and elsewhere. To illuminate the fallacy of this reasoning, I have run probit regressions estimating the probability of either receiving a termination notice or being “terminated” as Dr. Blanchflower has defined it after controlling simultaneously for several of the

²³ Blanchflower Pre-2012 Report, p. 44.

performance metrics Dr. Blanchflower utilized in his Tables 4 to 7. I report the results in Figure X (for receiving a termination notice) and Figure XI (for being terminated). Sometimes the performance metrics that Dr. Blanchflower says the Board relied upon to make turnaround decisions were statistically insignificant.

49. According to Dr. Blanchflower's Table 3, the Board selected high schools for turnaround in 2008 based in part on attendance. However, attendance is statistically insignificant in the 2008 high school regression related to termination notices (Figure X) and the 2008 high school regression related to terminations (Figure XI). Similarly 2008 and 2009 performance points are the sole school performance criteria that Dr. Blanchflower's Table 3 identifies as related to the 2010 high school turnaround selection process, yet neither variable is a statistically significant explanatory variable in the 2010 high school regression explaining termination notices (Figure X) or terminations (Figure XI). In fact, the 2008 performance points coefficient estimate is the wrong sign in both regressions. If it were true that statistical insignificance was affirmative proof that a variable had no effect on the turnaround decision, then that would mean that the Board and Dr. Blanchflower have asserted falsely that the Board relied on these statistically insignificant school performance criteria to select turnaround schools. Of course, it is not true that statistical insignificance proves that a variable did not affect the turnaround decision. A variable that does affect the termination decision may be statistically insignificant in a probit regression if the regression includes other variables that are correlated with the statistically insignificant variable, if there is little variation in the variable across the sample or if the sample is too small.

50. Although the purpose of Figures X and XI was to illustrate that Dr. Blanchflower was misinterpreting the meaning of statistical insignificance, Figures X and XI also show race effects even after controlling for numerous school performance metrics that are correlated with race. Even after controlling for school performance, being African-American was a statistically significant predictor of a worker receiving a termination notice as a result of the 2010 elementary school turnarounds and all of the high school turnarounds from 2008 through 2010. Similarly, even after controlling for school performance, being African-American was a statistically significant predictor of a worker being terminated as a result of the 2010 elementary school and high school turnarounds.

VII. CONCLUSION

51. My analysis of data provided to me by CTU establishes that the 2008, 2009 and 2010

turnaround processes had adverse impact on African-American CTU members. CPS schools were segregated in a way such that the turnaround selection process had the potential to cause disparate impact, and that potential was realized. White CTU members' selection rate to receive termination notices was between 20% and 32% of that for African-Americans based on the dataset that Dr. Blanchflower developed. The C.F.R. test for adverse impact is a selection rate for the favored group that is 80% or less than that of the disfavored group. The observed disparities in selection rates were statistically significant to a very high confidence level. Logit analysis also indicated statistically significant differences between African-American and white CPS workers' likelihoods of being impacted by the 2008, 2009 and 2010 turnarounds. I have explicitly discussed the analytical results based on Dr. Blanchflower's data, but I have conducted similar analysis based on CPS and CTU business records. I report these in Appendix B and these results also establish disparate impact.

52. Dr. Blanchflower's analyses further corroborate disparate impact. Based on Dr. Blanchflower's analysis, African-American CTU members' likelihoods of receiving a termination notice as a result of the 2008, 2009, and 2010 turnarounds were statistically significantly higher than other CTU members' likelihoods. According to Dr. Blanchflower's analysis summarized in his Table 4, being African-American also increased the likelihood of termination. The increased likelihood of termination was statistically significant when Dr. Blanchflower considered all 2008 turnarounds, all 2009 turnarounds, all 2010 turnarounds, 2008 elementary school turnarounds alone, 2009 elementary school turnarounds alone, 2009 high school turnarounds alone, 2010 elementary school turnarounds alone and 2010 high school turnarounds alone.

53. Dr. Blanchflower conducted additional analyses that appear to be based on data mining. Dr. Blanchflower included as controls in these additional probit regressions school performance metrics that the Board did not necessarily rely upon when selecting schools for turnaround. Data mining renders statistical significance measures unreliable and may uncover spurious correlations between the control variables (here the performance metrics) and the dependent variable (here being terminated).

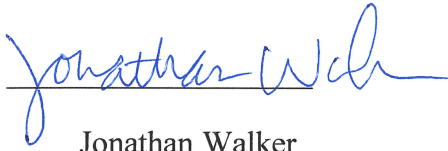
54. After adding school performance variables to his regression, Dr. Blanchflower finds no additional effect of race on the probability of being terminated as a result of turnaround other than that which is attributable to correlation between race and the school performance measures. Dr.

Blanchflower mistakenly interpreted this result as proving the absence of discrimination. His logic was invalid for several reasons. Perhaps most significantly, Dr. Blanchflower's various regressions do not refute the existence of adverse impact, even defining adverse impact in the narrow way that Dr. Blanchflower does to only include final and permanent terminations. Dr. Blanchflower's interpretation of his regression results is an example of the travel ban fallacy. It is possible to discriminate against persons on the basis of religion, either intentionally or unintentionally, by selecting to ban travelers by country. Such a ban may discriminate unintentionally if the selected countries' citizens happen to be predominantly of one religion or another, and such a ban may discriminate intentionally if the banned countries are chosen specifically because of their citizens' religious beliefs. An econometric analysis that controls for country of origin may find no statistically significant effect of religion on an individual's probability of being banned even though the ban affects one or more religions disproportionately, perhaps on purpose. The same reasoning applies to turnarounds and terminations. Selecting schools for turnaround based on school performance metrics does not rule out that the turnarounds may have disparate impact on African-American CTU members, either intentionally or unintentionally. Moreover, if Dr. Blanchflower's legal opinion is incorrect that receipt of a termination notice is not an actionable adverse employment event, then that is a separate and independent reason why his inference is invalid that his regression results disprove discrimination.

55. Dr. Blanchflower's analysis does not establish that turnarounds achieve any legitimate business purpose. The data that Dr. Blanchflower presented indicating that turnaround schools improved in certain dimensions are inconclusive. Dr. Blanchflower did not conduct a controlled analysis showing that the turnaround schools improved any more than similar schools; he reports no analysis demonstrating that apparent improvements are statistically significant rather than being attributable to chance, and he reports no analysis to show that turnaround schools improved because they were turned around rather than improving due to higher budgets or due to some other change that could have been implemented without turnaround or disparate impact.

56. In short, the 2008-2010 turnarounds had adverse impact whether an adverse employment event is defined as receiving a termination notice or remaining terminated from the CPS as of March of the year following such notice. Dr. Blanchflower's analysis attempting to control for school performance does not refute this adverse impact of the 2008-2010 turnarounds, nor does it prove or even imply that the adverse impact was both unintentional and necessary to achieve

legitimate Board goals. Moreover, race had an independent, statistically significant effect on the likelihood of receiving a termination notice as a result of the 2010 turnarounds and the 2008 and 2009 high school turnarounds even after controlling for multiple school performance metrics simultaneously. Similarly, race also had an independent, statistically significant effect on the likelihood of being terminated as a result of the 2010 turnarounds even after controlling for multiple school performance metrics simultaneously.



Jonathan Walker

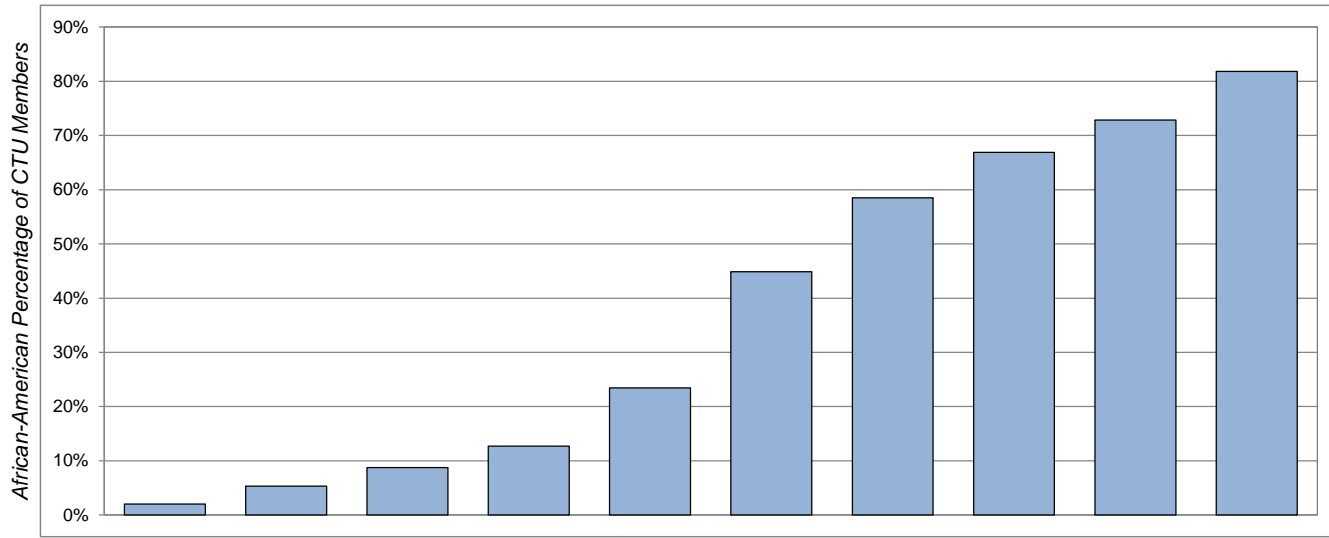
April 24, 2017

Figure I

African-American Percentage of CTU Members by Decile

All CTU Members

2008



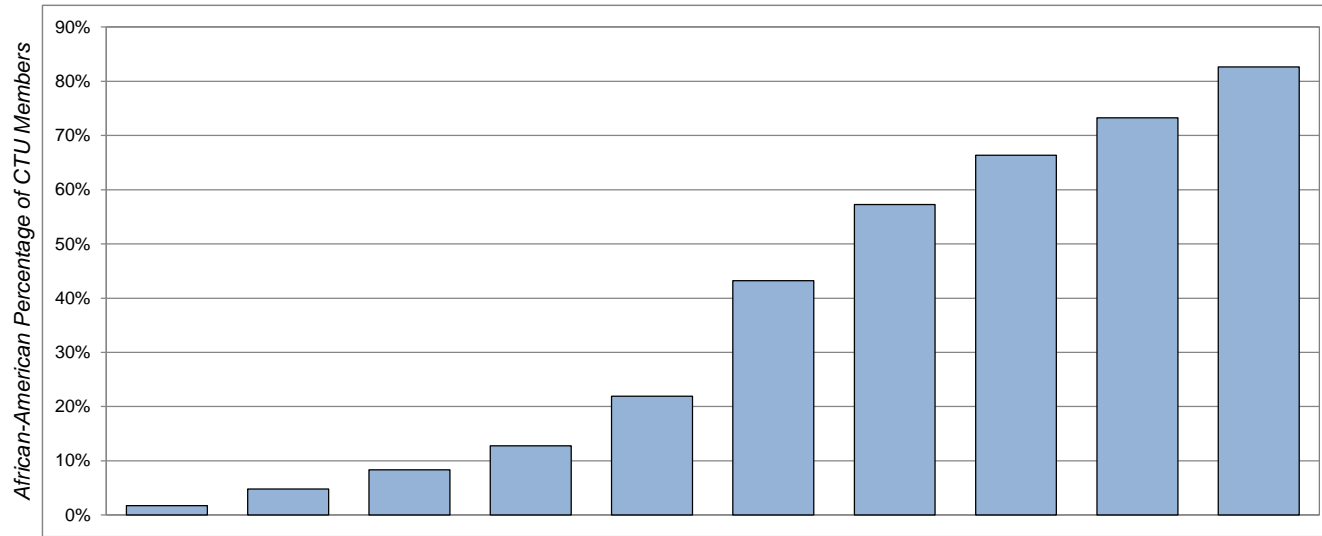
Decile:	Lowest 10%	2 nd Decile	3 rd Decile	4 th Decile	5 th Decile	6 th Decile	7 th Decile	8 th Decile	9 th Decile	Highest 10%
School A-A% of School CTU Members:	2%	5%	9%	13%	23%	45%	59%	67%	73%	82%
# of Schools:	59	58	58	59	61	55	59	58	59	57

Figure I

African-American Percentage of CTU Members by Decile

All CTU Members

2009



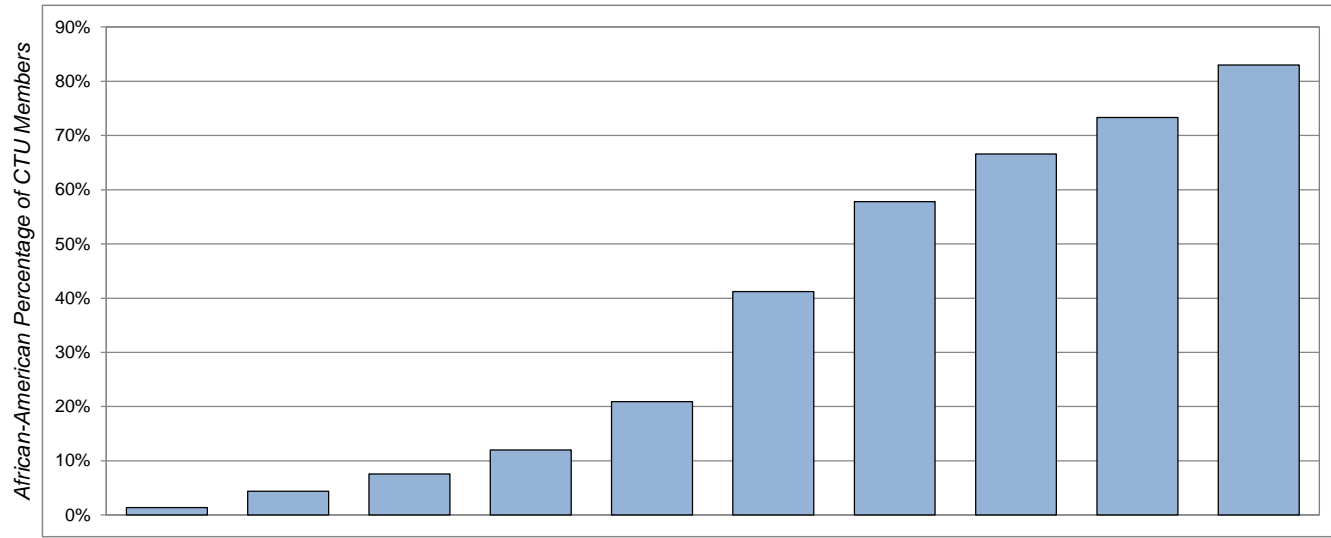
Decile:	Lowest 10%	2 nd Decile	3 rd Decile	4 th Decile	5 th Decile	6 th Decile	7 th Decile	8 th Decile	9 th Decile	Highest 10%
School A-A% of School CTU Members:	2%	5%	8%	13%	22%	43%	57%	66%	73%	83%
# of Schools:	59	59	59	58	58	58	59	59	60	56

Figure I

African-American Percentage of CTU Members by Decile

All CTU Members

2010



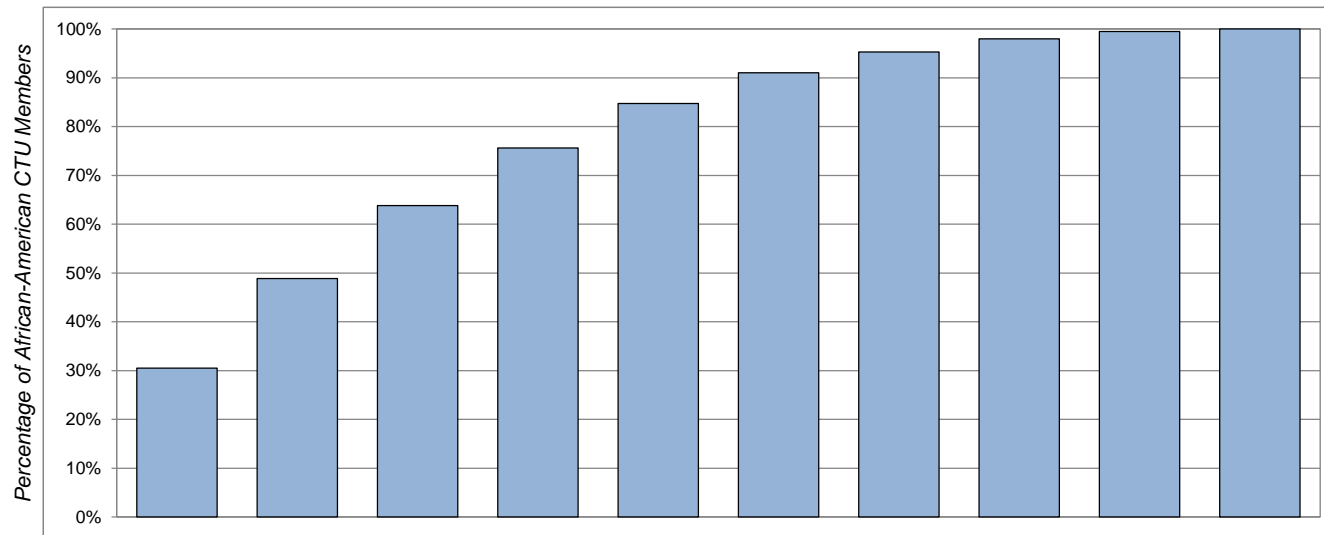
Decile:	Lowest 10%	2 nd Decile	3 rd Decile	4 th Decile	5 th Decile	6 th Decile	7 th Decile	8 th Decile	9 th Decile	Highest 10%
School A-A% of School CTU Members:	1%	4%	8%	12%	21%	41%	58%	67%	73%	83%
# of Schools:	59	58	60	57	59	58	60	57	60	57

Figure II

Cumulative Percentage of African-American CTU Members by Decile

All CTU Members

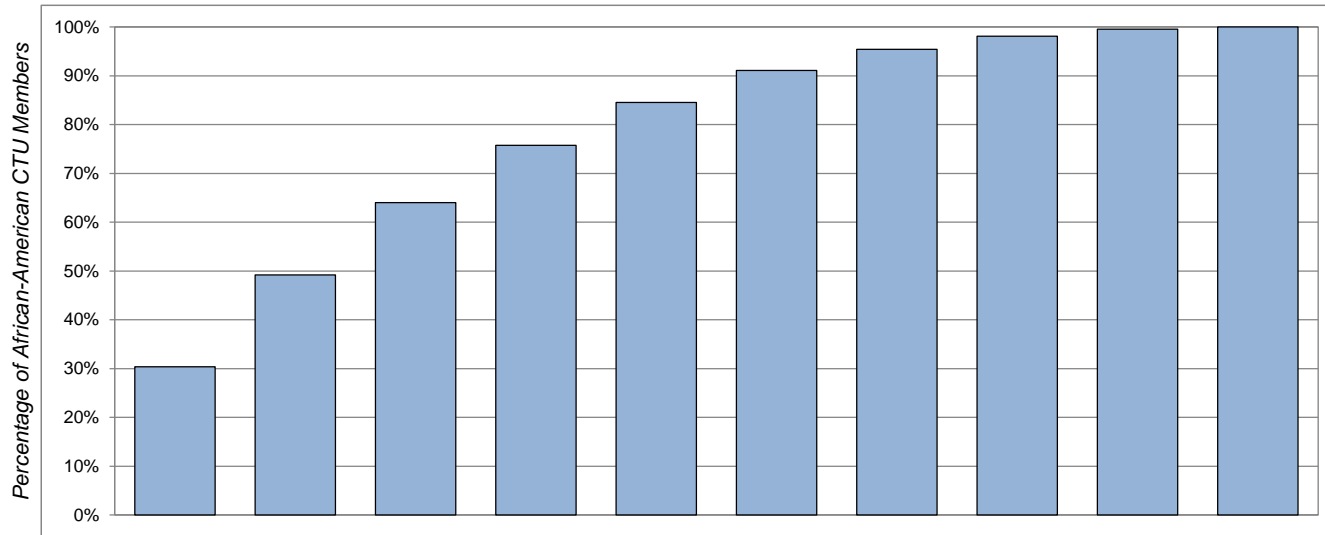
2008



Schools: 1 - 58 1 - 116 1 - 174 1 - 233 1 - 291 1 - 349 1 - 408 1 - 466 1 - 524 1 - 583

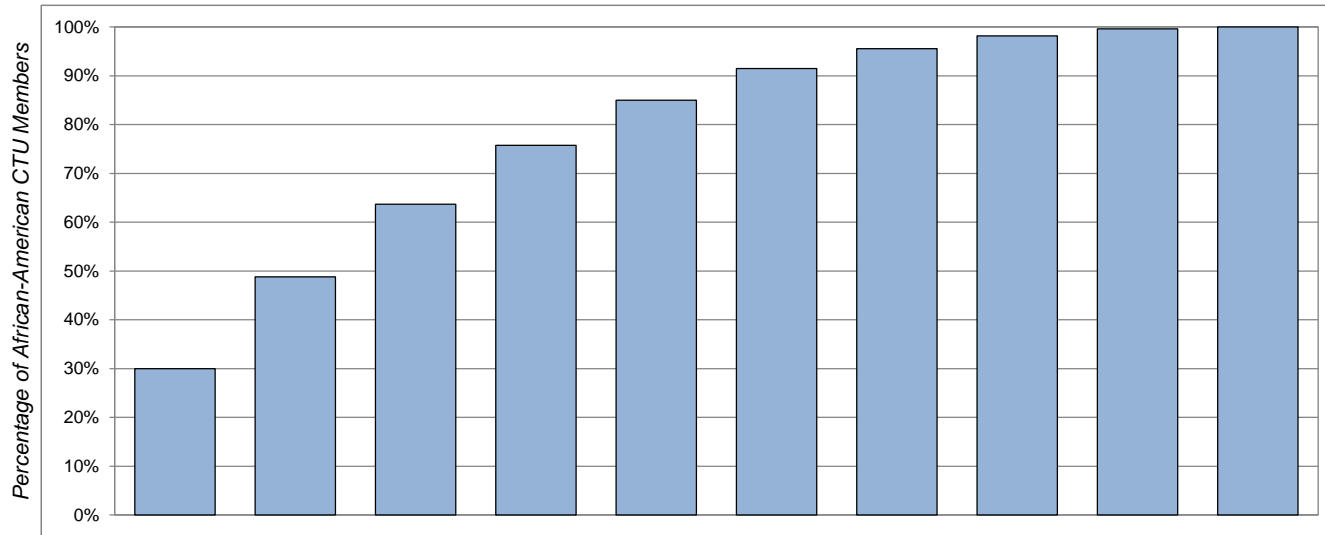
School A-A% of All A-A CTU Members:	31%	49%	64%	76%	85%	91%	95%	98%	100%	100%
School A-A% of School CTU Members:	61%	59%	58%	55%	51%	46%	42%	38%	34%	32%
School A-A% of All CTU Members:	10%	16%	20%	24%	27%	29%	30%	31%	32%	32%

Figure II
Cumulative Percentage of African-American CTU Members by Decile
 All CTU Members
 2009



Schools:	1 - 58	1 - 117	1 - 175	1 - 234	1 - 292	1 - 351	1 - 409	1 - 468	1 - 526	1 - 585
School A-A% of All A-A CTU Members:	30%	49%	64%	76%	85%	91%	95%	98%	100%	100%
School A-A% of School CTU Members:	57%	59%	59%	56%	51%	46%	42%	37%	34%	31%
School A-A% of All CTU Members:	10%	15%	20%	24%	26%	28%	30%	31%	31%	31%

Figure II
Cumulative Percentage of African-American CTU Members by Decile
 All CTU Members
 2010



Schools:	1 - 58	1 - 117	1 - 175	1 - 234	1 - 292	1 - 351	1 - 409	1 - 468	1 - 526	1 - 585
School A-A% of All A-A CTU Members:	30%	49%	64%	76%	85%	91%	96%	98%	100%	100%
School A-A% of School CTU Members:	59%	59%	57%	55%	50%	46%	41%	36%	33%	30%
School A-A% of All CTU Members:	9%	15%	19%	23%	26%	28%	29%	30%	30%	30%

Figure III

Racial Composition of Probation Eligible Schools
2008

School	Number of Schools	African-American Percentage	White Percentage
All Schools	583	31%	42%
Elementary Schools	476	31%	41%
High Schools	107	32%	47%
Turnaround Schools	5	62%	27%
Harper High School		62%	30%
Julia Ward Howe School		69%	22%
Morton Career Academy		69%	22%
Nicholas Copernicus School		67%	19%
Robert Fulton School		50%	29%

Figure III

Racial Composition of Probation Eligible Schools

2009

School	Number of Schools	African-American Percentage	White Percentage
All Schools	546	30%	42%
Elementary Schools	461	30%	40%
High Schools	85	30%	47%
Turnaround Schools	4	69%	19%
Christian Fenger Academy		67%	19%
James Weldon Johnson School		54%	33%
John Foster Dulles School		88%	9%
Mary Mcleod Bethune School		65%	19%

Figure III

Racial Composition of Probation Eligible Schools
2010

School	Number of Schools	African-American Percentage	White Percentage
All Schools	539	29%	42%
Elementary Schools	457	29%	40%
High Schools	82	29%	47%
Turnaround Schools	5	65%	21%
Charles S Deneen School		66%	17%
George W Curtis School		74%	13%
John Marshall Metro High School		63%	23%
Myra Bradwell Arts & Sci Acad		79%	19%
Wendell Phillips Academy		52%	29%

Figure IV
African-American and White Percentage of CTU Members
By School
As of 2008

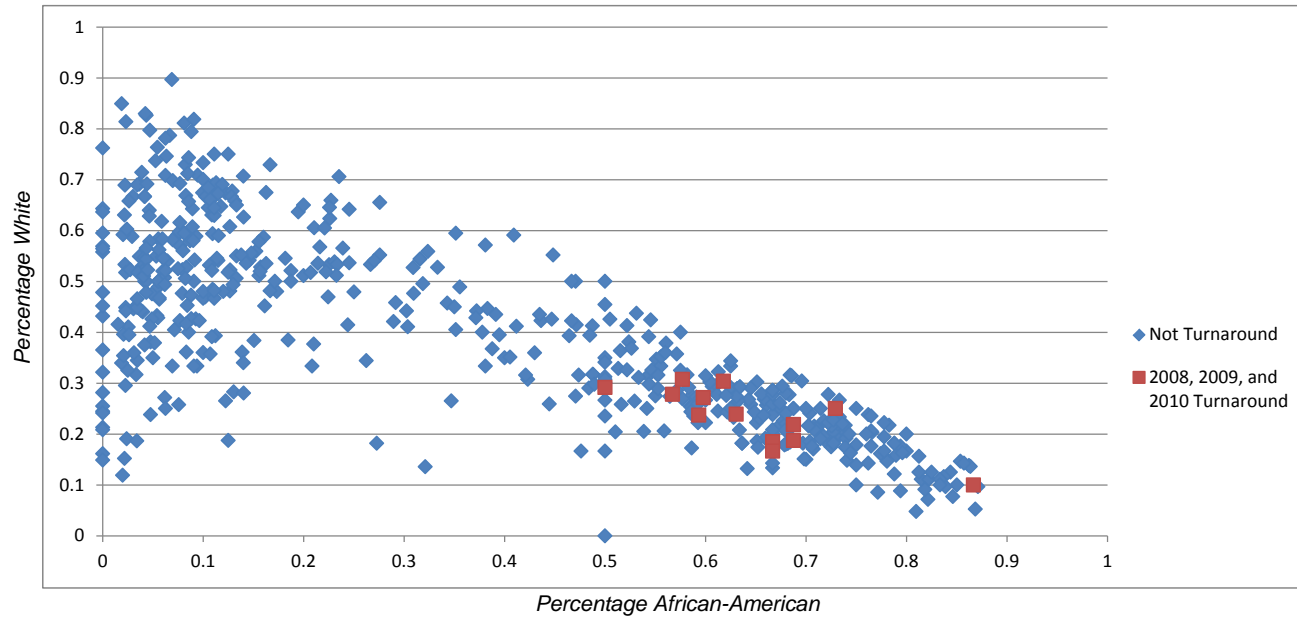


Figure V
Comparison of African-American and White Selection Rates by Turnaround Selection Stages

Selection Stage	Year	Number of White CTU Members	Number of Selected White CTU Members	White Selection Rate	Number of African-American CTU Members	Number of Selected African-American CTU Members	African-American Selection Rate	Ratio of White Selection Rate to African-American Selection Rate	P-Value (T-Test)	Number of Schools	Number of Selected Schools
From All Schools to Turnaround	2008	12,542	64	0.5%	9,229	149	1.6%	0.32	0.0000	584	5
From Eligible Schools with Teachers to Turnaround		12,403	64	0.5%	9,101	149	1.6%	0.32	0.0000	583	5
From All Schools to Turnaround	2009	12,131	37	0.3%	8,790	134	1.5%	0.20	0.0000	586	4
From Eligible Schools with Teachers to Turnaround		11,569	37	0.3%	8,238	134	1.6%	0.20	0.0000	546	4
From All Schools to Turnaround	2010	11,873	52	0.4%	8,254	158	1.9%	0.23	0.0000	586	5
From Eligible Schools with Teachers to Turnaround		11,208	52	0.5%	7,719	158	2.0%	0.23	0.0000	539	5

Note: Ineligible schools were identified with a blank Probation status.

Figure VI

Probability of a CTU Member Being in a Turnaround School
Logit

Year	Logit	With Clustered Standard Errors	
		Coefficient (Z Stat) [P-Value]	Coefficient (Z Stat) [P-Value]
2008	African-American	1.2231 (8.06) [0.000]	1.2231 (10.42) [0.000]
	Other Minority	-0.7217 (-2.56) [0.010]	-0.7217 (-2.12) [0.034]
	Teacher	0.3583 (1.72) [0.086]	0.3583 (1.77) [0.077]
	High School	0.5785 (4.28) [0.000]	0.5785 (0.51) [0.608]
	Constant	-5.8185	-5.8185
	N	28,648	28,648
	Pseudo R2	0.0522	0.0522
2009	African-American	1.7190 (9.13) [0.000]	1.7190 (8.10) [0.000]
	Other Minority	-0.2940 (-0.93) [0.353]	-0.2940 (-0.94) [0.346]
	Teacher	0.1682 (0.78) [0.436]	0.1682 (1.39) [0.165]
	High School	1.2860 (8.58) [0.000]	1.2860 (1.09) [0.274]
	Constant	-6.4827	-6.4827
	N	26,720	26,720
	Pseudo R2	0.0963	0.0963
2010	African-American	1.6404 (10.13) [0.000]	1.6404 (11.19) [0.000]
	Other Minority	-0.2893 (-1.07) [0.284]	-0.2893 (-1.36) [0.175]
	Teacher	0.8254 (3.32) [0.001]	0.8254 (3.53) [0.000]
	High School	1.2242 (9.10) [0.000]	1.2242 (1.28) [0.199]
	Constant	-6.7021	-6.7021
	N	25,769	25,769
	Pseudo R2	0.0956	0.0956

Figure VII

Probability of CTU Member Being in Turnaround School
Odds Ratio
Logit

Year	Logit	Odds Ratio	Inverse Odds Ratio
2008	African-American	3.2090	0.3116
2009	African-American	5.1536	0.1940
2010	African-American	4.4831	0.2231

Figure VIII
Correlation Between Model Controls and Race of CTU Members
Percentage of CTU Members

Year	Model Control		All		Eligible Schools	
			African-American CTU Members	White CTU Members	African-American CTU Members	White CTU Members
2008	Attend 2008-2007	Correlation Coefficient	-0.0525	0.0219	-0.0525	0.0219
		P-Value	0.2112	0.6022	0.2112	0.6022
	Years Probation	Correlation Coefficient	0.2515**	-0.1945*	0.2515**	-0.1945*
		P-Value	<.0001	<.0001	<.0001	<.0001
	Points 2008	Correlation Coefficient	-0.3209**	0.2745**	-0.3209**	0.2745**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Attend 2005-2007	Correlation Coefficient	-0.2322**	0.1999*	-0.2322**	0.1999*
		P-Value	<.0001	<.0001	<.0001	<.0001
	Read 2005-2007	Correlation Coefficient	0.0812	-0.1288*	0.0812	-0.1288*
		P-Value	0.0832	0.0059	0.0832	0.0059
	EPA Read Gain	Correlation Coefficient	-0.4742*	0.4926*	-0.4742*	0.4926*
		P-Value	<.0001	<.0001	<.0001	<.0001
	PSAE Reading 2007	Correlation Coefficient	-0.2881*	0.3507*	-0.2881*	0.3507*
		P-Value	0.0122	0.0020	0.0122	0.0020
PSAE Math 2007	Correlation Coefficient	-0.4448*	0.4788*	-0.4448*	0.4788*	
	P-Value	<.0001	<.0001	<.0001	<.0001	
2009	PSAE/ISAT Exceeds	Correlation Coefficient	-0.3568**	0.3296**	-0.3569**	0.3297**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Years Probation	Correlation Coefficient	0.2934**	-0.2542**	0.3084**	-0.2600**
		P-Value	<.0001	<.0001	<.0001	<.0001
Points 2008	Correlation Coefficient	-0.4874**	0.5037**	-0.4874**	0.5040**	
	P-Value	<.0001	<.0001	<.0001	<.0001	
2010	ISAT/PSAE 2009	Correlation Coefficient	-0.3794**	0.3444**	-0.3797**	0.3451**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Points 2009	Correlation Coefficient	-0.5106**	0.5145**	-0.5140**	0.5168**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Points 2008	Correlation Coefficient	-0.4972**	0.5033**	-0.5004**	0.5064**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Years Probation	Correlation Coefficient	0.3675**	-0.3191**	0.3907**	-0.3316**
		P-Value	<.0001	<.0001	<.0001	<.0001

*The probability that the model control and race of CTU Members is unrelated is statistically significant.

**The probability that the model control and race of CTU Members is unrelated is statistically significant and less than one in a million.

Note: In table 5 in Dr. Blanchflower's report, Years Probation is referred to as Probation 2008.

Figure IX
Correlation Between Model Controls and Race of CTU Members
Absolute Number of CTU Members

Year	Model Control		All		Eligible Schools	
			African-American CTU Members	White CTU Members	African-American CTU Members	White CTU Members
2008	Attend 2008-2007	Correlation Coefficient	-0.4051**	-0.1769*	-0.4051**	-0.1769*
		P-Value	<.0001	<.0001	<.0001	<.0001
	Years Probation	Correlation Coefficient	0.4260**	0.0780	0.4260**	0.0780
		P-Value	<.0001	0.0607	<.0001	0.0607
	Points 2008	Correlation Coefficient	-0.4666**	-0.1056*	-0.4666**	-0.1056*
		P-Value	<.0001	0.0134	<.0001	0.0134
	Attend 2005-2007	Correlation Coefficient	-0.2557**	0.1377*	-0.2557**	0.1377*
		P-Value	<.0001	0.0030	<.0001	0.0030
	Read 2005-2007	Correlation Coefficient	0.0852	-0.0867	0.0852	-0.0867
		P-Value	0.0691	0.0642	0.0691	0.0642
	EPA Read Gain	Correlation Coefficient	-0.3791*	0.3169*	-0.3791*	0.3169*
		P-Value	0.0004	0.0035	0.0004	0.0035
	PSAE Reading 2007	Correlation Coefficient	-0.1505	0.3000*	-0.1505	0.3000*
		P-Value	0.1976	0.0089	0.1976	0.0089
PSAE Math 2007	Correlation Coefficient	-0.2417*	0.4117*	-0.2417*	0.4117*	
	P-Value	0.0367	0.0002	0.0367	0.0002	
2009	PSAE/ISAT Exceeds	Correlation Coefficient	-0.5252**	0.0034	-0.5252**	0.0035
		P-Value	<.0001	0.9377	<.0001	0.9354
	Years Probation	Correlation Coefficient	0.4580**	0.0218	0.4696**	0.0083
		P-Value	<.0001	0.5994	<.0001	0.8458
Points 2008	Correlation Coefficient	-0.4928**	0.1700*	-0.4930**	0.1712*	
	P-Value	<.0001	<.0001	<.0001	<.0001	
2010	ISAT/PSAE 2009	Correlation Coefficient	-0.5483**	0.0009	-0.5432**	0.0083
		P-Value	<.0001	0.9831	<.0001	0.8490
	Points 2009	Correlation Coefficient	-0.4847**	0.2079**	-0.4819**	0.2204**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Points 2008	Correlation Coefficient	-0.5011**	0.1881*	-0.5004**	0.1900*
		P-Value	<.0001	<.0001	<.0001	<.0001
Years Probation	Correlation Coefficient	0.4742**	-0.0735	0.4775**	-0.0946*	
	P-Value	<.0001	0.0758	<.0001	0.0282	

*The probability that the model control and race of CTU Members is unrelated is statistically significant.

**The probability that the model control and race of CTU Members is unrelated is statistically significant and less than one in a million.

Note: In table 5 in Dr. Blanchflower's report, Years Probation is referred to as Probation 2008.

Figure X

Probability of a CTU Member Being in a Turnaround School
Per Dr. Blanchflower's Models
Probit

Year	Probit	Elementary Schools	High Schools
		With Clustered Standard Errors Coefficient (Z Stat) [P-Value]	With Clustered Standard Errors Coefficient (Z Stat) [P-Value]
2008	African-American	-0.0944 (-1.00) [0.315]	0.3405 (2.64) [0.008]
	Other Minority	0.2248 (2.82) [0.005]	-0.3776 (-3.77) [0.000]
	Teacher	0.2985 (3.25) [0.001]	-0.1686 (-2.97) [0.003]
	Attend 2008-2007		-0.0495 (-1.11) [0.266]
	Years Probation	0.3222 (4.82) [0.000]	0.0000 (0.00) [0.000]
	Points 2008	-0.0174 (-1.47) [0.141]	2.2514 (0.71) [0.478]
	Attend 2005-2007	-0.3772 (-2.06) [0.039]	
	Read 2005-7	-0.0794 (-3.19) [0.001]	
	Constant	-2.4870	-2.6045
	N	20,478	1,386
	Pseudo R2	0.51	0.06
2009	African-American	-0.3509 (-1.82) [0.069]	0.2827 (12.42) [0.000]
	Other Minority	-0.5740 (-4.30) [0.000]	-0.0670 (-5.10) [0.000]
	Teacher	-0.3321 (-3.78) [0.000]	0.1343 (10.55) [0.000]
	Probation 2008	0.5823 (2.49) [0.013]	
	Points 2008	-0.3420 (-2.25) [0.024]	-0.0879 (-1.50) [0.134]
	PSAE/ISAT Exceeds	-0.3346 (-3.40) [0.001]	-1.6113 (-3.25) [0.001]
	Constant	15.9723	4.7592
	N	19,951	7,410
	Pseudo R2	0.87	0.69
	2010	African-American	0.2357 (2.95) [0.003]
Other Minority		0.4170 (3.29) [0.001]	0.3795 (3.11) [0.002]
Teacher		0.2122 (2.71) [0.007]	0.2702 (6.40) [0.000]
Years Probation		-0.3469 (-2.36) [0.018]	0.0000 (0.00) [0.000]
Points 2008		-0.1119 (-2.40) [0.016]	0.1937 (1.47) [0.142]
Points 2009		-0.0887 (-1.84) [0.065]	-0.1619 (-1.24) [0.214]
PSAE/ISAT 2009		-0.0187 (-0.37) [0.710]	
Constant		4.3772	-3.2133
N		19,284	1,177
Pseudo R2		0.67	0.41

Figure XI

Probability of a CTU Member Being in a Turnaround School and Terminated
Per Dr. Blanchflower's Models
Probit

Year	Probit	Elementary Schools	High Schools	
		With Clustered Standard Errors Coefficient (Z Stat) [P-Value]	With Clustered Standard Errors Coefficient (Z Stat) [P-Value]	
2008	African-American	-0.0713 (-0.48) [0.628]	-0.1100 (-1.02) [0.307]	
	Other Minority	0.2749 (3.71) [0.000]	-0.1259 (-1.72) [0.086]	
	Teacher	-0.0682 (-1.54) [0.123]	-0.1849 (-5.87) [0.000]	
	Attend 2008-2007		-0.0458 (-1.29) [0.196]	
	Years Probation	0.2662 (5.41) [0.000]	0.0000 (0.00) [0.000]	
	Points 2008	-0.0153 (-1.56) [0.119]	1.8923 (0.74) [0.459]	
	Attend 2005-2007	-0.3476 (-2.55) [0.011]		
	Read 2005-7	-0.0637 (-3.51) [0.000]		
	Constant	-2.5511	-2.7206	
	N	20,478	1,386	
	Pseudo R2	0.43	0.03	
2009	African-American	-0.2171 (-2.27) [0.023]	-0.1742 (-1.15) [0.252]	
	Other Minority	-0.5852 (-14.73) [0.000]	0.1024 (1.72) [0.086]	
	Teacher	-0.7299 (-5.73) [0.000]	-0.3818 (-2.25) [0.024]	
	Probation 2008	0.2142 (4.23) [0.000]		
	Points 2008	-0.1524 (-4.79) [0.000]	-0.0731 (-1.62) [0.105]	
	PSAE/ISAT Exceeds	-0.1866 (-3.07) [0.002]	-1.3387 (-3.66) [0.000]	
	Constant	8.2636	3.9209	
	N	19,951	7,410	
		Pseudo R2	0.73	0.59
	2010	African-American	0.2177 (3.16) [0.002]	0.5226 (3.61) [0.000]
Other Minority		0.5284 (3.91) [0.000]	0.4534 (2.40) [0.016]	
Teacher		-0.1655 (-2.65) [0.008]	0.0556 (0.29) [0.772]	
Years Probation		-0.3029 (-2.47) [0.013]	0.0000 (0.00) [0.000]	
Points 2008		-0.1045 (-3.07) [0.002]	0.1728 (1.75) [0.080]	
Points 2009		-0.0864 (-2.23) [0.026]	-0.1131 (-1.38) [0.168]	
PSAE/ISAT 2009		-0.0127 (-0.28) [0.776]		
Constant		3.6768	-3.6265	
N		19,284	1,177	
		Pseudo R2	0.64	0.33

Appendix A

Curriculum Vitae of Dr. Jonathan L. Walker

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Education

Ph.D., Economics, Massachusetts Institute of Technology, 1991

A.B., Economics, University of California, Berkeley, 1983

Fellowships, Honors and Awards

1986: American Economic Association Doctoral Fellowship

1983: National Science Foundation Graduate Fellowship

1983: Honors in General Studies, University of California, Berkeley

Fields of Concentration

Industrial Organization, Labor Economics, Economic History

Professional Experience

2003 – Present: President, Economists Incorporated

2001 – 2002: Principal, Economists Incorporated

1998 – 2000: Senior Vice President, Economists Incorporated

1996 – 1998: Vice President, Economists Incorporated

1990 – 1996: Senior Economist, Economists Incorporated

Professional Experience (continued)

1988 – 1990: Management Consultant, Monitor Company, Cambridge, Massachusetts

1987 – 1988: Visiting Research Fellow, Federal Reserve Bank of Boston, Boston Massachusetts

1987: Teaching Assistant Massachusetts Institute of Technology

Dissertation

Essays on the Commercial Banking Industry

Publications

“Discounting Lost Future Earnings,” *Economists Ink*, Summer 2015
(with Erica Greulich)

“DTB and the Use of Regression Analysis to Assess Market Definition and Competitive Effects,” *Antitrust Law Section of the American Bar Association, Economics Committee Newsletter*, Spring 2011 (with Erica Greulich)

“Preparing for Trial: Expert Economic Testimony,” *Antitrust Section of the American Bar Association 59th Spring Meeting*, Continuing Legal Education Written Materials, March 2011

“The Single Entity Issue in American Needle and DTB,” *Westlaw Journal Antitrust*, Volume 18, Issue 1, April 2010 (with Erica Greulich)

“Event Studies, Toxic Stock and Non-Compete Provisions,” *Economists Ink*, Fall 2005

“Statistical Evidence and a Daubert Challenge in a Recent Discrimination Case,” *Economists Ink*, Summer 2004

“Price Increases Attributable to Patent Infringement or Entry,” *Economists Ink*, Spring 2004 (with Tessie Su)

“Ninth Circuit Expounds on Antitrust Injury,” *Economists Ink*, Fall 2003

“The Deterrence Value of Punitive Damages,” *Economists Ink*, Fall 2001 (with Laura Malowane)

Publications (continued)

“Recent Development in Bank Merger Competition Policy,” *Banking Law Review*, Spring 1992 (with Bruce Snapp and David Balto)

“U.S. Bank Merger Competition Policy,” *International Merger Law* 16, December 1991 (with Bruce Snapp)

“Not So Safe Harbor for Bank Mergers,” *Economists Ink*, Winter 1991

Panels

87th Annual Conference of the Western Economics Association International, “Sports Economics on Trial,” June 30, 2012 – Symposium panelist

American Bar Association Antitrust Section Annual Meetings, March 9, 2011 – Presentation concerning preparation for economic trial testimony

American Law Institute – American Bar Association Course of Study, “Antitrust Law in the 21st Century,” September 14-15, 2000 – Presentation concerning the economics of professional sports leagues

American Bar Association Antitrust Section Annual Meetings, April 14, 1999 – Presentation concerning the economic foundations of antitrust law

National Economists Club Educational Foundation, “What Effect Will Financial Restructuring Have On Banks?” August 13, 1991 – Moderator

Board Memberships

Economists Incorporated SF-

Marin Food Bank

Expert Reports and Testimony

Federal Deposit Insurance Corporation v. PricewaterhouseCoopers LLP and Crowe Horwath LLP – Expert report and deposition testimony on behalf of plaintiffs concerning damages

Precision Spine, Inc. and Spinal USA, Inc. v. Zavation, LLC et al. – Expert report on behalf of plaintiffs concerning damages

Chicago Teachers Union et al. v. Board of Education of the City of Chicago et al. (Case No. 12 C 10311) – Expert report on behalf of plaintiffs concerning liability

Expert Reports and Testimony (continued)

Chicago Teachers Union et al. v. Board of Education of the City of Chicago et al. (Case No. 12 C 10338) – Expert report and deposition testimony on behalf of plaintiffs concerning liability

Charles Ridgeway, et al. v. Wal-Mart Stores, Inc. – Expert report, trial and deposition testimony on behalf of defendant concerning class injury and damages

Daniel Villalpando, et al. v. Exel Direct Inc., et al. – Expert report and deposition testimony on behalf of defendants concerning class damages

United States ex rel. Landis v. Tailwind Sports Corp., et al. – Expert report and deposition testimony of behalf of plaintiff concerning damages

The West Virginia Investment Management Board et al. v. The Variable Annuity Life Insurance Company – Expert report and deposition testimony on behalf of defendant concerning damages

In Re Taco Bell Wage and Hour Actions – Expert reports (2), deposition and trial testimony on behalf of defendant concerning liability and remedies

In Re: Processed Egg Products Litigation – Expert reports (4), class decertification declaration, hearing and deposition testimony on behalf of defendants concerning antitrust damages and liability

Peter Sripamot v. Nor Cal Freight Mgmt., Inc., et al. – Expert report on behalf of defendant concerning damages

Moroccanoil Inc., v. Marc Anthony Cosmetics, Inc., et al. – Expert report and deposition testimony on behalf of plaintiff concerning trademark infringement remedies

Isidro Baricuatro, Jr., et al. v. Industrial Personnel and Management Services, Inc., et al. – Expert report and deposition testimony on behalf of defendants concerning Fair Labor Standards Act and contract damages

Ameira Watters v. General Motors LLC, et al. – Expert report on behalf of defendants concerning damages

Louis Cimaglia v. Royal Pontiac Buick GMC Inc., et al. – Expert report on behalf of defendants concerning damages

Expert Reports and Testimony (continued)

United States v. Bank of America Corp. et al. – Expert report and deposition testimony on behalf of defendants concerning financial harm

Diane Zwarg v. BB&T Insurance Services of California, Inc., et al. – Trial and deposition testimony on behalf of defendants concerning damages

Ritchie Risk – Linked Strategies Trading (Ireland), Ltd., et al. v. Coventry First LLC, et al. – Expert report and deposition testimony on behalf of defendants concerning economic loss

In Re: BDO Seidman – Expert report and deposition testimony on behalf of defendant concerning damages from alleged breach of professional responsibility

U.S. SEC v. Ralph Cioffi – Deposition testimony on behalf of defendant concerning hedge fund operations

Ultra Internet Media, S.A., et al. v. Caesars License Company, LLC et al. – Expert report on behalf of defendants concerning damages

Lauren Knowles v. Kelly Buick, Inc., et al. – Expert report on behalf of defendants concerning economic loss

Kenneth D. Klaas, et al. v. Vestin Mortgage Inc., et al. – Expert reports (2) on behalf of defendants concerning contract damages

Tyr Sport, Inc. v. Warnaco Swimwear, Inc., United States Swimming, Inc., et al. – Expert report on behalf of defendants concerning antitrust liability

United States of America v. Ralph Cioffi and Matthew Tannin – Testimony at criminal trial on behalf of defendants concerning hedge fund operations

Charles M. Felton et al. v. Vestin Realty Mortgage II, et al. – Deposition testimony and testimony at a bench trial on behalf of defendants concerning contract damages

National Union Fire Insurance Co. of Pittsburgh, PA v. Puget Plastics Corporation et al. – Deposition testimony and testimony at a bench trial on behalf of plaintiff concerning lost profits and diminution in business value

Deutscher Tennis Bund, et al. v. ATP Tour Inc. – Expert reports (2), deposition testimony and testimony at a jury trial on behalf of defendant concerning antitrust liability

Expert Reports and Testimony (continued)

John Johnson, et al. v. Big Lots Stores, Inc. – Expert reports (2), declarations (2), deposition testimony, and testimony at a bench trial on behalf of defendant concerning alleged violation of Fair Labor Standards Act.

MGP Ingredients, Inc. v. Mars, Inc. and S&M NuTec, LLC – Expert report and deposition testimony on behalf of defendant concerning damages

In Re: H Street Building Corporation – Deposition testimony on behalf of defendant concerning damages

In Re: The National Benevolent Association of the Christian Church (Disciples of Christ), et al. – Expert report, rebuttal report and deposition testimony on behalf of plaintiff concerning damages

Chemical Overseas Holdings Inc., et al. v. Republica Oriental Del Uruguay, et al. – Expert report, supplemental report and arbitration testimony on behalf of respondents concerning damages

In Re: Lockheed Meridian, MS Shooting Incident – Expert reports (3) and deposition testimony on behalf of defendant concerning damages

John D. Wee v. Charles Schwab & Co., Inc. – Arbitration testimony on behalf of plaintiff concerning damages

In Re: Robin Singh d/b/a Test Masters – Expert reports (2), declaration and deposition testimony on behalf of plaintiff concerning damages

Patrick J. Cunningham and Anton N. Zanki v. International Business Machines Corporation – Expert report, rebuttal report and deposition testimony on behalf of defendant concerning alleged breach of contract

Mark Hodges, et al. v. Greater Canton Ford Mercury, Inc., et al. – Expert report on behalf of defendant concerning punitive damages

In Re: Frank T. Vega – Declaration on behalf of defendant concerning damages

Martin Leach v. Ford Motor Co. – Expert report on behalf of defendant concerning the corporate officer labor market in a breach of contract suit

Westways World Travel, Inc. and Sundance Travel Service v. AMR Corp., et al. – Expert report and deposition testimony on behalf of defendants concerning compensatory damages

Expert Reports and Testimony (continued)

Traci A. Savage v. Ford Motor Co. – Expert report on behalf of defendant concerning the economics of punitive damages

Randy Eugene Wheeler v. Ford Motor Co. – Deposition testimony on behalf of defendant concerning lost NFL earnings and other alleged damages

David Braswell v. Holley Performance Products Inc. – Expert report and rebuttal on behalf of defendant concerning antitrust liability and antitrust damages

Ertha Mae Williams v. CSX Transportation Inc., et al. – Deposition testimony on behalf of defendants concerning the economics of punitive damages

R. Straman Co. and Newport Convertible Engineering, Inc. v. Volkswagen of America, et al. – Deposition testimony on behalf of defendants concerning antitrust liability and antitrust injury

Roll International Corporation and Paramount Farms, Inc. v. Unilever United States, Inc. and Conopco, Inc. – Testimony at jury trial on behalf of defendants regarding compensatory damages for alleged breach of contract and false promise

Newhall Land and Farming Co. v. Kerr McGee Operating Corporation, et al. – Deposition testimony on behalf of defendants concerning the economics of punitive damages

Marcia Spielholz, et al. v. Los Angeles Cellular Telephone Company, et al. – Expert report on behalf of defendants concerning remedies in a class action false advertising suit

David N. Orrik v. Stryker Corporation, et al. - Deposition testimony on behalf of defendants concerning the economics of punitive damages

Agneta Karlsson, et al. v. Michael A. Savage – Deposition testimony on behalf of defendants concerning the economics of punitive damages and product liability

Homestore, Inc. v. America Online – Expert report and arbitration testimony on behalf of respondent concerning damages from breach of contract

Michael Meitus, et al. v. Dain Rauscher Wessels, Dain Rauscher Corporation and Dain Rauscher Inc. – Arbitration testimony on behalf of claimants concerning the competitive structure of the securities industry and other economic matters

In Re: 1994 Exxon Chemical Plant Fire – Expert report on behalf of defendant concerning the economics of punitive damages

Expert Reports and Testimony (continued)

Avis Buchanan, et al v. Consolidated Stores Corp. – Declaration and deposition testimony on behalf of defendant concerning statistical and other economic analyses in a class action public accommodations suit

State of Alabama v. Exxon Corporation – Affidavit and testimony at post-trial hearing on behalf of defendant concerning the economics of punitive damages

Aspen Knolls Corp., et al v. McDermott Will & Emery – Expert report on behalf of defendant concerning damages in a legal malpractice suit

Legi-Slate Inc. v. Thomson Information Services Inc. – Expert reports (2) and deposition testimony on behalf of plaintiff concerning damages from breach of contract

United States of America ex rel., William I. Koch and William A. Presley v. Koch Industries, Inc., et al. – Expert report, deposition testimony and testimony at jury trial on behalf of defendants concerning economic issues in a False Claims Act suit

Ronald O. Lewis v. Booz-Allen & Hamilton Inc. – Expert reports (4) and deposition testimony on behalf of plaintiff regarding statistics and damages in an employment discrimination suit

Richard Rogers Mason v. Ford Motor Company – Expert report and deposition testimony on behalf of defendant regarding liability in a product liability suit

Dr. Michael J. Galvin v. The New York Racing Association, Inc., et al. – Expert report and declaration on behalf of defendant regarding commercial damages in breach of due process and tortious interference suit

Roll International Corporation and Paramount Farms, Inc. v. Unilever United States, Inc., et al. – Deposition and bench trial testimony on behalf of defendants regarding business valuation and damages in a breach of contract and fraudulent misrepresentation suit

Yvonne Trout, et al. v. John Dalton, et al. – Affidavit and declaration on behalf of the United States concerning prejudgment interest

Willie Brown Jr., et al. v. General Motors Corporation – Testimony at deposition and jury trial concerning lost NFL player earnings

Royer Homes of Mississippi, Inc., et al. v. Redman Homes, Inc., et al. – Affidavits (2), expert reports (2) and deposition testimony on behalf of defendants concerning antitrust liability and damages

Expert Reports and Testimony (continued)

W. C. and A. N. Miller Companies v. United States of America – Expert report and deposition testimony on behalf of defendant concerning commercial damages in a Federal Tort Claims Act suit

SMS Systems Maintenance Services, Inc. v. Digital Equipment Corporation – Expert report and deposition testimony on behalf of defendant concerning antitrust damages and liability

Francis W. Murray and FWM Corporation v. National Football League, et al. – Expert report and deposition testimony on behalf of defendants regarding market definition, alleged anticompetitive conduct and alleged antitrust injury

Michael A. Willner v. Dow Jones & Company, Inc., et al. – Deposition testimony on behalf of defendants regarding damages in a breach of contract and unfair dealing suit

Dream Team Collectibles, Inc. v. NBA Properties, Inc. – Expert reports (2) and deposition testimony on behalf of NBA Properties regarding damages and other economic issues in a trademark infringement suit and counter suit

Breezevale Limited v. Timothy L. Dickinson, et al. – Deposition and jury trial testimony on behalf of defendants regarding commercial damages in a legal malpractice suit

Sonja Lumpkin v. Citizens Bank of Maryland, Incorporated – Affidavit on behalf of defendant regarding damages in a wrongful termination suit

Carolee Brady Hartman, et al. v. Joseph Duffey – Declarations (7) and live testimony at four Teamsters Hearings on behalf of the defendant, the United States Government, regarding damage estimation in a class action sex discrimination suit

Robert B. Reich v. Charles I. Brown, Peter M. Mazula, and Ronald F. Nuzman – Affidavit and deposition testimony for the United States Department of Labor regarding alleged breach of fiduciary responsibility under ERISA

United Farmers Agents Association, Inc. v Farmers Insurance Exchange, et al. and Thomas J. Vinson, et al. v Farmers Insurance Exchange, et al. – Affidavit and deposition testimony for plaintiffs regarding antitrust liability

Anthony Brown, et al. v Pro Football, Inc. – Testimony for defendants, the member clubs of the NFL, at jury trial regarding antitrust damages

Expert Reports and Testimony (continued)

Robert E. Connor, et al. v. Harris County, et al. – Deposition testimony and a written declaration for plaintiffs, members of a class of job applicants, regarding a cost defense for allegedly discriminatory employment practices

Laura Kelber against Forest Electric Corp. and Forest Datacom – Affidavit in opposition to defendants’ motion for summary judgement in a sex discrimination suit

Selected Consulting Matters

Ernst & Young/ KPMG – Antitrust consulting regarding potential consolidation

NASCAR Souvenirs – Consulting for defendants concerning class certification in an antitrust matter

First Databank – Antitrust consulting regarding acquisition of Medi-Span Inc.

Metal Supermarkets – Consulting for plaintiff regarding commercial damages arising from legal malpractice

Vulcan – Antitrust consulting regarding the acquisition of an Atlanta quarry

Brodus v. Children’s National Medical Center – Consulting regarding damages in a wrongful termination suit

International Paper – Antitrust consulting regarding photographic paper and other photographic material

St. Louis Convention and Visitors Commission v. National Football League, et al. – Antitrust consulting regarding franchise relocation

The Baltimore City Paper – Consulting regarding commercial damages allegedly arising from libel

Allied Domecq – Consulting for liquor supplier regarding terminated dealer’s lost profits

National Football League – Consulting regarding trademark and antitrust issues in suits between the Dallas Cowboys and its affiliates and the NFL

IndyCar Racing – Antitrust consulting

Albertson’s – Antitrust consulting for potential plaintiff in a price-fixing matter

Selected Consulting Matters (continued)

New Orleans Hospitals – Antitrust consulting regarding joint venture among New Orleans hospitals

General Dynamics – Consulting for plaintiff regarding damages in commercial litigation

Telecom Technical Services, et al. v. ROLM – Consulting for plaintiffs in antitrust litigation

The Boston Herald – Consulting regarding damages allegedly caused by publication of a news story

Automotive Dismantlers and Recyclers Association v. ADP Claims Solutions Group, Inc. – Antitrust consulting regarding used automobile parts databases

Mercy/St. Vincent – Consulting regarding the merger of two hospital systems in Toledo, Ohio

Kalium/IMC – Consulting regarding the merger of Kalium and IMC

Agricultural Chemicals Antitrust Litigation – Antitrust consulting for defendants, Zeneca Corp., Helena Corp. and Terra Corp. in an RPM class action suit

The Clorox Company v. Sterling Winthrop, Inc., et al. – Antitrust consulting for plaintiffs in litigation alleging misuse of trademark protections for anticompetitive gain

Chittenden Corporation – Antitrust consulting regarding a bank holding company's acquisition plans

National Basketball Association – Damage estimation for the NBA in antitrust suit brought against it by Independent Entertainment Group Incorporated

Magic Line Inc. – Merger of ATM networks

Home Shopping Network – Ex-post valuation of contingent contract concerning software and consulting services

Lenfest Group, Comcast Corporation and Telecommunications Incorporated – Consultation regarding Delaware Public Service Commission rules to implement the Telecommunications Technology Investment Act

Selected Consulting Matters (continued)

Worthen Financial Corporation – Acquisition of Union National Bank of Arkansas

Intrust Bank – Merger with Kansas State Bank & Trust

Iowa National Bankshares – Merger with MidAmerica Savings Banks *First*

National Bank of Kerrville – Acquisition of Bank of Kerrville *Peoples Heritage*

Financial Group – Acquisitions of Mid Maine Savings Bank, Bank of New Hampshire, CFX, and certain branches of Fleet Bank of Maine

Potash Antitrust Litigation – Antitrust consulting for defendants in a class action suit alleging price fixing in the potash industry

R&D Business Systems, et al. v. Xerox Corporation – Antitrust consulting for plaintiffs in a class action suit alleging tying and monopolization in the copier and printer industries

Society Corp. – Acquisition of Ameritrust

VDDE Holm, Voest Alpina, Bohler – Antitrust consulting in connection with the merger of two European steel manufacturers

McNeil, et al. v. NFL – Estimation of damages resulting from player reservation system

U.S Department of Justice v. City of Alhambra, California – Analysis of evidence of discriminatory hiring practice

Christiana Mortgage Brokers, et al. v. Delaware Trust, et al. – Estimation of damages resulting from tortious interference in the mortgage brokerage industry in New Castle County, Delaware

Merger of Two Savings and Loan Assns. – Antitrust consulting in connection with the merger of two thrift institutions

Mid Atlantic Coca-Cola – Analysis of evidence of price fixing and estimation of resulting damages

Professional Societies

American Economic Association

American Bar Association

Industrial Organization Society

Western Economics Association

American Law and Economics Association

Society of Labor Economics

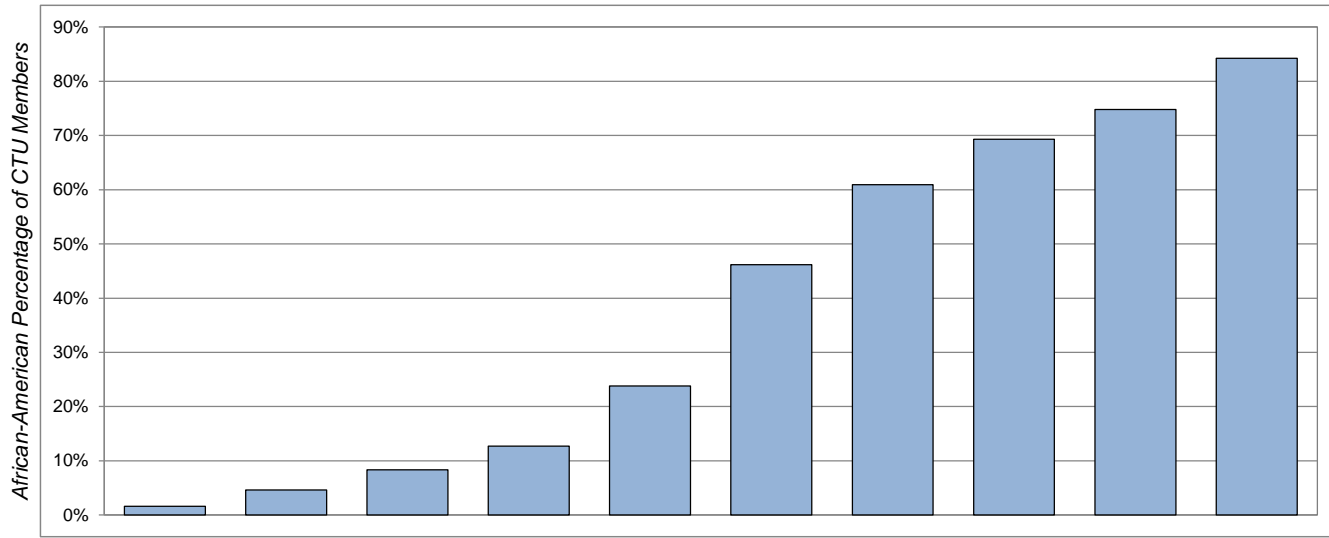
Appendix B

Figures 1 - 9

Figure 1

African-American Percentage of CTU Members by Decile

All CTU Members
2008

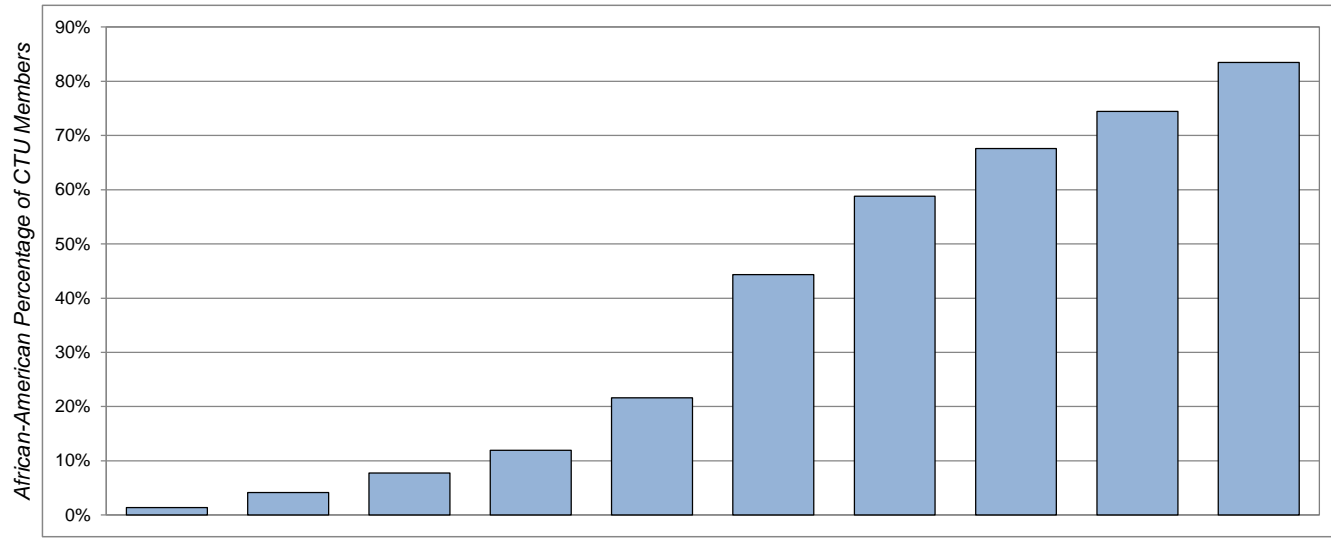


Decile:	Lowest 10%	2 nd Decile	3 rd Decile	4 th Decile	5 th Decile	6 th Decile	7 th Decile	8 th Decile	9 th Decile	Highest 10%
School A-A% of School CTU Members:	2%	5%	8%	13%	24%	46%	61%	69%	75%	84%
# of Schools:	60	60	63	55	61	57	60	60	58	59

Figure 1

African-American Percentage of CTU Members by Decile

All CTU Members
2009

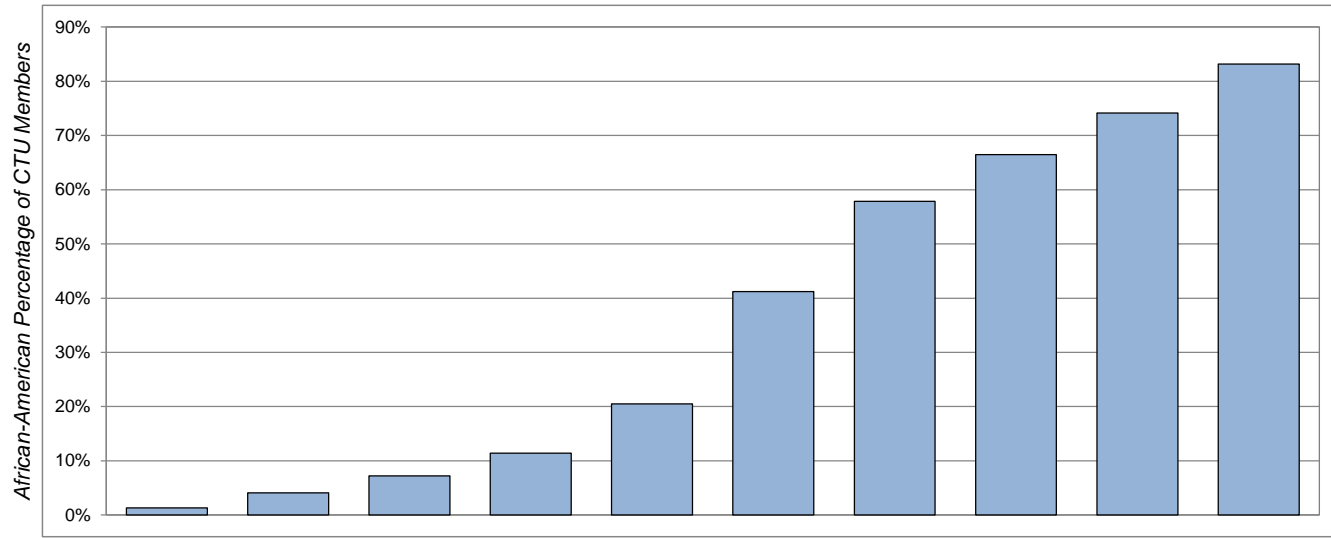


Decile:	Lowest 10%	2 nd Decile	3 rd Decile	4 th Decile	5 th Decile	6 th Decile	7 th Decile	8 th Decile	9 th Decile	Highest 10%
School A-A% of School CTU Members:	1%	4%	8%	12%	22%	44%	59%	68%	74%	83%
# of Schools:	59	60	58	59	60	58	59	59	62	55

Figure 1

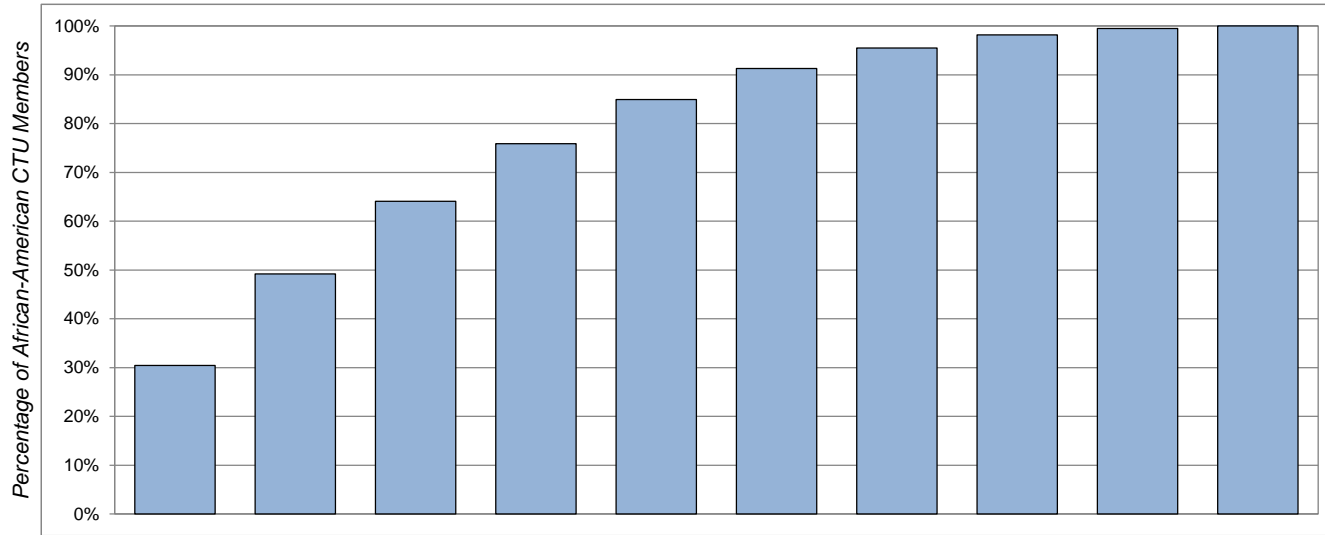
African-American Percentage of CTU Members by Decile

All CTU Members
2010



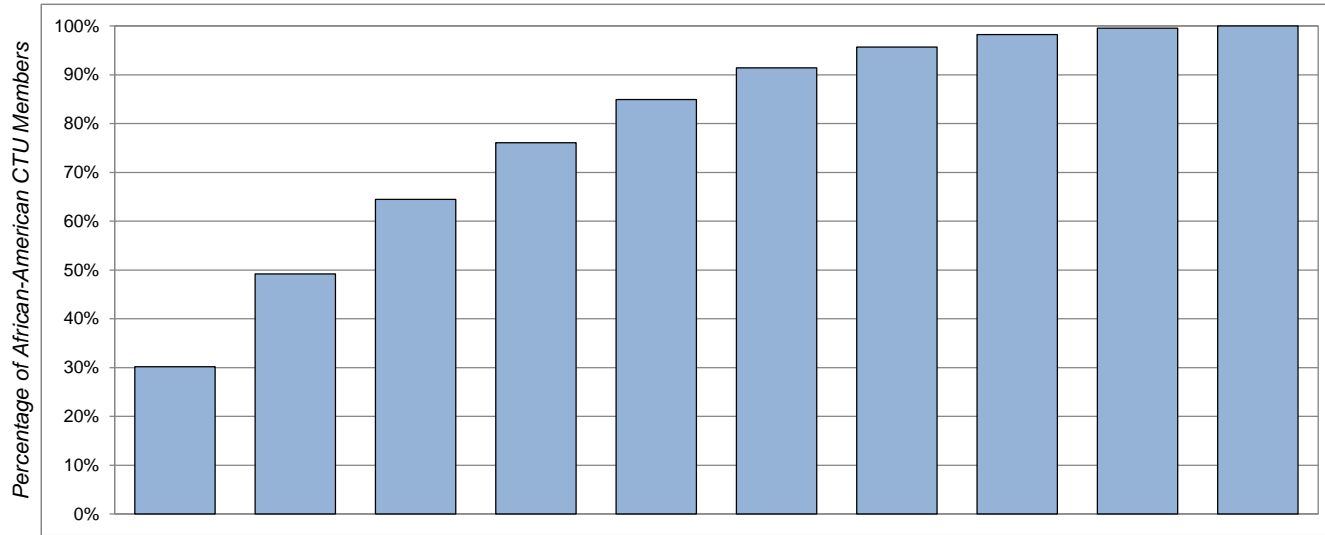
Decile:	Lowest 10%	2 nd Decile	3 rd Decile	4 th Decile	5 th Decile	6 th Decile	7 th Decile	8 th Decile	9 th Decile	Highest 10%
School A-A% of School CTU Members:	1%	4%	7%	11%	21%	41%	58%	66%	74%	83%
# of Schools:	61	56	59	58	59	59	57	59	60	56

Figure 2
Cumulative Percentage of African-American CTU Members by Decile
 All CTU Members
 2008



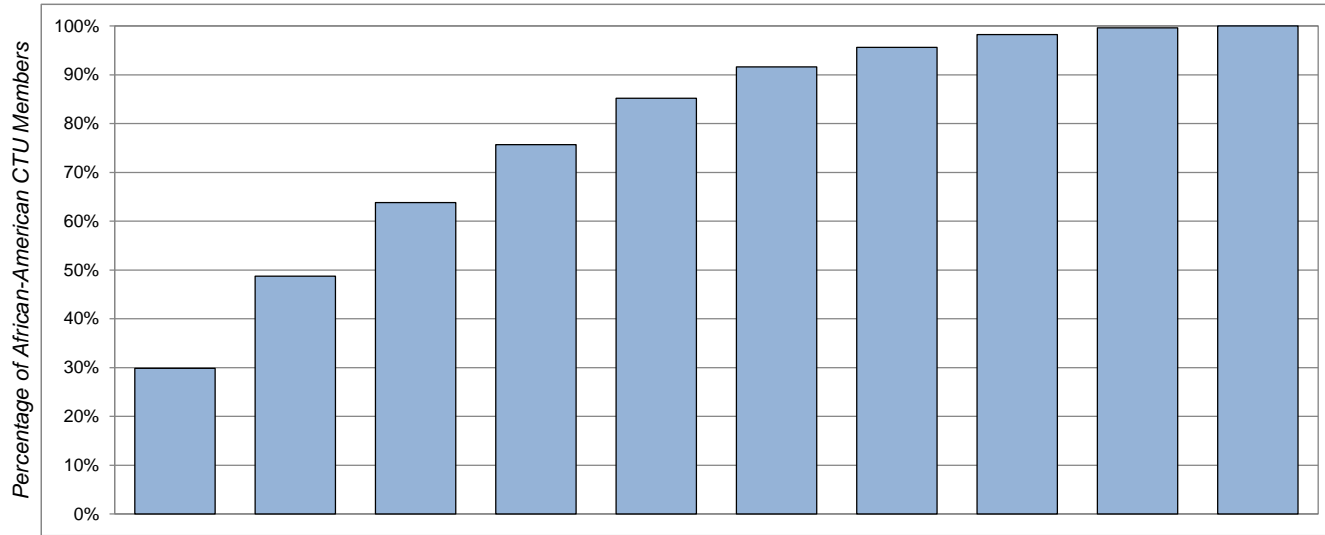
Schools:	1 - 59	1 - 118	1 - 177	1 - 237	1 - 296	1 - 355	1 - 415	1 - 474	1 - 533	1 - 593
School A-A% of All A-A CTU Members:	30%	49%	64%	76%	85%	91%	96%	98%	100%	100%
School A-A% of School CTU Members:	62%	60%	58%	56%	52%	47%	42%	38%	34%	31%
School A-A% of All CTU Members:	10%	15%	20%	24%	27%	29%	30%	31%	31%	31%

Figure 2
Cumulative Percentage of African-American CTU Members by Decile
 All CTU Members
 2009



Schools:	1 - 58	1 - 117	1 - 176	1 - 235	1 - 294	1 - 353	1 - 412	1 - 471	1 - 530	1 - 589
School A-A% of All A-A CTU Members:	30%	49%	64%	76%	85%	91%	96%	98%	100%	100%
School A-A% of School CTU Members:	62%	60%	58%	56%	51%	46%	41%	37%	33%	31%
School A-A% of All CTU Members:	9%	15%	20%	23%	26%	28%	29%	30%	31%	31%

Figure 2
Cumulative Percentage of African-American CTU Members by Decile
 All CTU Members
 2010



Schools:	1 - 58	1 - 116	1 - 175	1 - 233	1 - 292	1 - 350	1 - 408	1 - 467	1 - 525	1 - 584
School A-A% of All A-A CTU Members:	30%	49%	64%	76%	85%	92%	96%	98%	100%	100%
School A-A% of School CTU Members:	60%	59%	57%	56%	50%	45%	40%	36%	32%	30%
School A-A% of All CTU Members:	9%	14%	19%	23%	25%	27%	28%	29%	30%	30%

Figure 3

Racial Composition of Probation Eligible Schools 2008

School	Number of Schools	African- American Percentage	White Percentage
All Schools	554	31%	42%
Elementary Schools	468	31%	40%
High Schools	86	31%	48%
Turnaround Schools	5	70%	23%
Harper High School		73%	26%
Julia Ward Howe School		63%	29%
Morton Career Academy		74%	17%
Nicholas Copernicus School		73%	13%
Robert Fulton School		63%	20%

Figure 3

Racial Composition of Probation Eligible Schools

2009

School	Number of Schools	African-American Percentage	White Percentage
All Schools	548	30%	43%
Elementary Schools	462	30%	41%
High Schools	86	30%	48%
Turnaround Schools	4	76%	16%
Christian Fenger Academy		78%	13%
James Weldon Johnson School		54%	38%
John Foster Dulles School		85%	12%
Mary Mcleod Bethune School		69%	19%

Figure 3

Racial Composition of Probation Eligible Schools
2010

School	Number of Schools	African-American Percentage	White Percentage
All Schools	536	30%	43%
Elementary Schools	454	30%	41%
High Schools	82	29%	49%
Turnaround Schools	5	69%	23%
Charles S Deneen School		71%	19%
George W Curtis School		80%	15%
John Marshall Metro High School		64%	24%
Myra Bradwell Arts & Sci Acad		79%	18%
Wendell Phillips Academy		61%	32%

Figure 4
African-American and White Percentage of CTU Members
By School
As of 2008

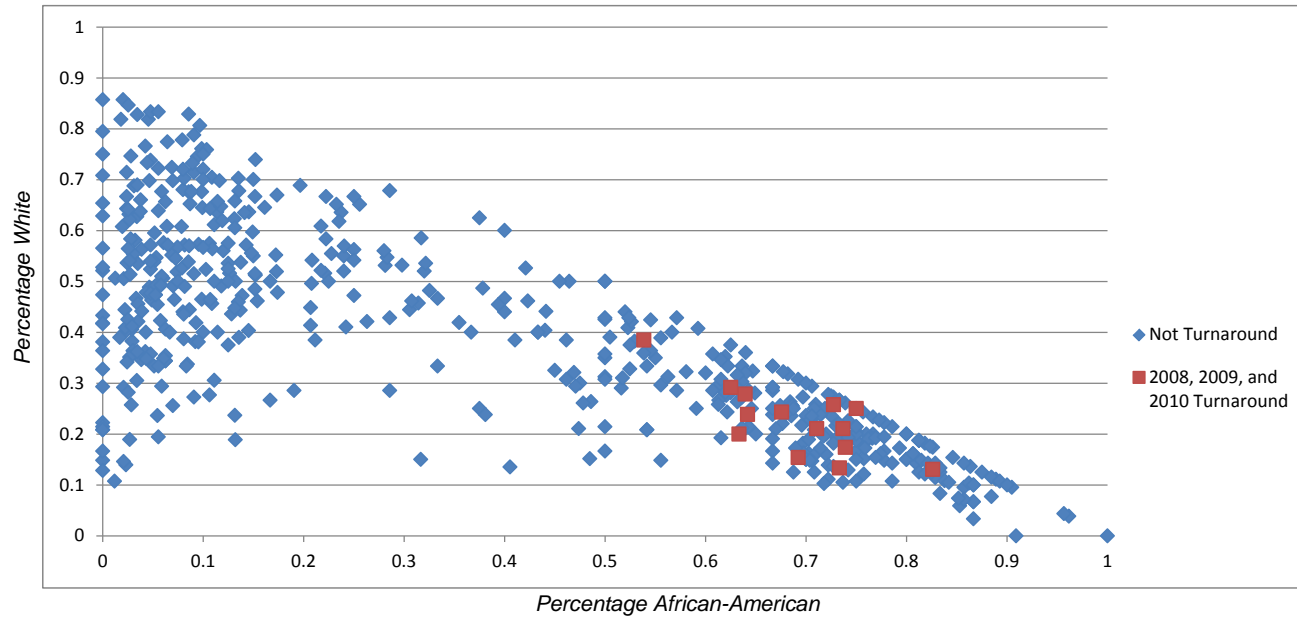


Figure 5
Comparison of African-American and White Selection Rates by Turnaround Selection Stages

Selection Stage	Year	Number of White CTU Members	Number of Selected White CTU Members	White Selection Rate	Number of African-American CTU Members	Number of Selected African-American CTU Members	African-American Selection Rate	Ratio of White Selection Rate to African-American Selection Rate	P-Value (T-Test)	Number of Schools	Number of Selected Schools
From All Schools to Turnaround	2008	10,099	36	0.4%	7,515	110	1.5%	0.24	0.0000	595	5
From Eligible Schools with Teachers to Turnaround		9,720	36	0.4%	7,160	110	1.5%	0.24	0.0000	554	5
From All Schools to Turnaround	2009	10,612	22	0.2%	7,601	104	1.4%	0.15	0.0000	590	4
From Eligible Schools with Teachers to Turnaround		10,110	22	0.2%	7,182	104	1.4%	0.15	0.0000	548	4
From All Schools to Turnaround	2010	11,072	44	0.4%	7,563	133	1.8%	0.23	0.0000	586	5
From Eligible Schools with Teachers to Turnaround		10,449	44	0.4%	7,104	133	1.9%	0.22	0.0000	536	5

Note: Ineligible schools were identified with a blank Probation status.

Figure 6

Probability of a CTU Member Being in a Turnaround School
Logit

Year	Logit	With Clustered Standard Errors	
		Coefficient (Z Stat) [P-Value]	Coefficient (Z Stat) [P-Value]
2008	African-American	1.5174 (7.80) [0.000]	1.5174 (14.08) [0.000]
	Other Minority	-0.5060 (-1.51) [0.132]	-0.5060 (-1.24) [0.217]
	Teacher	0.4666 (1.88) [0.060]	0.4666 (1.43) [0.152]
	High School	0.7018 (4.31) [0.000]	0.7018 (0.62) [0.536]
	Constant	-6.2962	-6.2962
	N	23,092	23,092
	Pseudo R2	0.0668	0.0668
2009	African-American	1.9935 (8.39) [0.000]	1.9935 (7.51) [0.000]
	Other Minority	-0.0504 (-0.14) [0.892]	-0.0504 (-0.16) [0.872]
	Teacher	0.1238 (0.52) [0.602]	0.1238 (0.87) [0.383]
	High School	1.4531 (8.26) [0.000]	1.4531 (1.22) [0.221]
	Constant	-6.9238	-6.9238
	N	23,664	23,664
	Pseudo R2	0.1136	0.1136
2010	African-American	1.6744 (9.51) [0.000]	1.6744 (11.83) [0.000]
	Other Minority	-0.2792 (-0.95) [0.342]	-0.2792 (-1.22) [0.224]
	Teacher	1.0366 (3.57) [0.000]	1.0366 (3.76) [0.000]
	High School	1.2828 (8.74) [0.000]	1.2828 (1.35) [0.178]
	Constant	-7.0385	-7.0385
	N	24,039	24,039
	Pseudo R2	0.1007	0.1007

Figure 7

Probability of CTU Member Being in Turnaround School
Odds Ratio
Logit

Year	Logit	Odds Ratio	Inverse Odds Ratio
2008	African-American	4.1972	0.2383
2009	African-American	6.7376	0.1484
2010	African-American	4.5118	0.2216

Figure 8
Correlation Between Model Controls and Race of CTU Members
Percentage of CTU Members

Year	Model Control		All		Eligible Schools	
			African-American CTU Members	White CTU Members	African-American CTU Members	White CTU Members
2008	Probation Status	Correlation Coefficient	0.3900**	-0.3585**	0.4193**	-0.3793**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Attend 2008-2007	Correlation Coefficient	-0.0540	0.0147	-0.0540	0.0147
		P-Value	0.2070	0.7318	0.2070	0.7318
	Years Probation	Correlation Coefficient	0.2586**	-0.1820*	0.2586**	-0.1820*
		P-Value	<.0001	<.0001	<.0001	<.0001
	Performance Points 2008	Correlation Coefficient	-0.4963**	0.4976**	-0.4973**	0.4999**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Attend 2005-2007	Correlation Coefficient	-0.2330**	0.2242*	-0.2330**	0.2242*
		P-Value	<.0001	<.0001	<.0001	<.0001
	Read 2005-2007	Correlation Coefficient	0.0875	-0.1465*	0.0875	-0.1465*
		P-Value	0.0607	0.0016	0.0607	0.0016
	EPA Read Gain	Correlation Coefficient	-0.5254**	0.5184**	-0.5254**	0.5184**
		P-Value	<.0001	<.0001	<.0001	<.0001
	PSAE Reading 2007	Correlation Coefficient	-0.3010*	0.3722*	-0.3010*	0.3722*
		P-Value	0.0082	0.0009	0.0082	0.0009
PSAE Math 2007	Correlation Coefficient	-0.4540*	0.4906*	-0.4540*	0.4906*	
	P-Value	<.0001	<.0001	<.0001	<.0001	
2009	Probation Status	Correlation Coefficient	0.4649**	-0.4529**	0.4931**	-0.4687**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Performance Points 2008	Correlation Coefficient	-0.4971**	0.4940**	-0.4972**	0.4940**
		P-Value	<.0001	<.0001	<.0001	<.0001
PSAE/ISAT Exceeds	Correlation Coefficient	-0.3791**	0.3246**	-0.3794**	0.3249**	
	P-Value	<.0001	<.0001	<.0001	<.0001	
Years Probation	Correlation Coefficient	0.3236**	-0.2458**	0.3236**	-0.2458**	
	P-Value	<.0001	<.0001	<.0001	<.0001	
2010	Probation Status	Correlation Coefficient	0.4525**	-0.4546**	0.4950**	-0.4837**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Performance Points 2009	Correlation Coefficient	-0.5170**	0.5145**	-0.5213**	0.5151**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Performance Points 2008	Correlation Coefficient	-0.5091**	0.5039**	-0.5090**	0.5034**
		P-Value	<.0001	<.0001	<.0001	<.0001
	ISAT/PSAE 2009	Correlation Coefficient	-0.3872**	0.3380**	-0.3880**	0.3387**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Years Probation	Correlation Coefficient	0.3768**	-0.2932**	0.3768**	-0.2932**
		P-Value	<.0001	<.0001	<.0001	<.0001

*The probability that the model control and race of CTU Members is unrelated is statistically significant.

**The probability that the model control and race of CTU Members is unrelated is statistically significant and less than one in a million.

Figure 9
Correlation Between Model Controls and Race of CTU Members
Absolute Number of CTU Members

Year	Model Control		All		Eligible Schools	
			African-American CTU Members	White CTU Members	African-American CTU Members	White CTU Members
2008	Probation Status	Correlation Coefficient	0.4100**	-0.1221*	0.4071**	-0.1537*
		P-Value	<.0001	0.0029	<.0001	0.0003
	Attend 2008-2007	Correlation Coefficient	-0.3959**	-0.1515*	-0.3959**	-0.1515*
		P-Value	<.0001	0.0004	<.0001	0.0004
	Years Probation	Correlation Coefficient	0.4036**	0.0340	0.4036**	0.0340
		P-Value	<.0001	0.4248	<.0001	0.4248
	Performance Points 2008	Correlation Coefficient	-0.4606**	0.1974*	-0.4607**	0.1994*
		P-Value	<.0001	<.0001	<.0001	<.0001
	Attend 2005-2007	Correlation Coefficient	-0.2345**	0.1394*	-0.2345**	0.1394*
		P-Value	<.0001	0.0027	<.0001	0.0027
	Read 2005-2007	Correlation Coefficient	0.0939*	-0.0965*	0.0939*	-0.0965*
		P-Value	0.0441	0.0387	0.0441	0.0387
	EPA Read Gain	Correlation Coefficient	-0.3545*	0.3467*	-0.3545*	0.3467*
		P-Value	0.0009	0.0012	0.0009	0.0012
	PSAE Reading 2007	Correlation Coefficient	-0.1186	0.3144*	-0.1186	0.3144*
		P-Value	0.3075	0.0057	0.3075	0.0057
	PSAE Math 2007	Correlation Coefficient	-0.2127	0.4239*	-0.2127	0.4239*
		P-Value	0.0651	0.0001	0.0651	0.0001
2009	Probation Status	Correlation Coefficient	0.3983**	-0.2204**	0.4048**	-0.2564**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Performance Points 2008	Correlation Coefficient	-0.4644**	0.2037*	-0.4645**	0.2048*
		P-Value	<.0001	<.0001	<.0001	<.0001
	PSAE/ISAT Exceeds	Correlation Coefficient	-0.4964**	0.0424	-0.4964**	0.0426
		P-Value	<.0001	0.3211	<.0001	0.3195
Years Probation	Correlation Coefficient	0.4430**	-0.0243	0.4430**	-0.0243	
	P-Value	<.0001	0.5708	<.0001	0.5708	
2010	Probation Status	Correlation Coefficient	0.3989**	-0.2229**	0.3991**	-0.2743**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Performance Points 2009	Correlation Coefficient	-0.4762**	0.2242**	-0.4730**	0.2359**
		P-Value	<.0001	<.0001	<.0001	<.0001
	Performance Points 2008	Correlation Coefficient	-0.4925**	0.2073*	-0.4921**	0.2081*
		P-Value	<.0001	<.0001	<.0001	<.0001
	ISAT/PSAE 2009	Correlation Coefficient	-0.5351**	0.0181	-0.5298**	0.0247
		P-Value	<.0001	0.6756	<.0001	0.5685
	Years Probation	Correlation Coefficient	0.4772**	-0.0768	0.4772**	-0.0768
		P-Value	<.0001	0.0757	<.0001	0.0757

*The probability that the model control and race of CTU Members is unrelated is statistically significant.

**The probability that the model control and race of CTU Members is unrelated is statistically significant and less than one in a million.