

The Effect of Desegregation Actions on White Enrollment Declines in the Indianapolis Public Schools.

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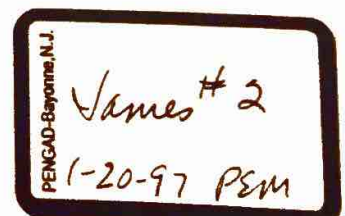
A large body of sociological research before and since the implementation of the IPS desegregation actions finds that mandatory busing of students for desegregative purposes contributes to white enrollment declines (often called "white flight") in the affected public school districts.¹ One desegregation expert concludes that there is a scholarly consensus that

school desegregation contributes to white flight and that the flight can be quite large for some school systems, especially those systems that are larger, have higher minority concentrations, and have suburban or private school systems that can serve as alternatives for those who flee a desegregation plan or for new residents who want to avoid one.²

IPS appears to satisfy all of the conditions that would lead to significant white flight. It is a large metropolitan district that had more than 60,000 students in 1980 when the desegregation plan was implemented and about 45,000 students in 1993 (see Table 3). The percentage of students in IPS who are African Americans is more than 50% (Table 4). There are substantial alternatives to enrollment in IPS from nearby public and private school systems (see private school enrollments in Table 8) and a major desegregation plan has been in effect for more than 16 years. Because of these concerns, the interdistrict

¹ See for example Coleman, Kelley and Moore (1975), Wilson (1985), Welch and Light (1987), Rossell (1990), Rossell (1986).

² Armor 1995:180



component of the desegregation plan was designed, at least in part, to attempt to minimize white flight from IPS.³

The purpose of this analysis is to assess the impact of the desegregation actions on white enrollment decline in IPS. White⁴ enrollments in IPS reached a maximum of about 73,000 students in 1967 and declined in each school year since that time according to the exhibit entitled "Indianapolis Public Schools Enrollments by Race: 1939-1995" contained in the Declaration of Mary Jo Dare.⁵ A copy of this exhibit is attached to this report as Figure 1 below. Since white enrollments in IPS began to decline about 13 years before the implementation of the desegregation actions in 1981-1982, it is clear that public school desegregation is not the sole cause of the decline in IPS white enrollments. Census data specially tabulated to the boundaries of public school districts indicate that the total population residing within the boundaries of IPS declined between 1970 and 1980 and from 1980 to 1990 (see Table 9)⁶, which would also contribute to the decline in white students attending IPS schools.

Estimating the Timing and Direction of Changes in IPS White Enrollment Declines Between 1970 and 1995.

³ United States v. Board of School Commissioners, 419 F.Supp. 180,181 (1975): "Although likelihood of "white flight" may not be used as an excuse for official inaction in dealing with problem of school desegregation, it may supply the reason for particular type of action.

⁴ The exhibit actually plots all students other than blacks. I refer to the figures as referring to whites since the number of students of other races than black or white is too small to affect the analyses conducted here.

⁵ Declaration of Mary Jo Dare, Director of Special Education/Student Services for the Indianapolis Public Schools dated May 2, 1996

⁶ I used the Taeuber-Wilson data set for 1970 (See Welch and Light (1987), U.S. Census summary tape file STF3F for 1980, and the U.S. Census data distributed U.S. Department of Education as part of the data file entitled "The School District Data Book" for 1990. No census data tabulated to the boundaries of school districts exists for earlier censuses.

If public school desegregation of IPS contributed significantly to the white enrollment declines in IPS beyond that produced by the preexisting process of white population decline, an increase in the rate of white enrollment decline should be apparent around 1980 at about the time that the desegregation policies were implemented. I investigated this possibility by summarizing the white enrollment decline since 1970 using ordinary least squares (OLS) regression techniques and the data provided in the Mary Jo Dare exhibit described above and displayed in Figure 1.

The procedure used is a standard analysis technique designed to identify the moment that a temporal trend changes to a different trend.⁷ First, I estimated the trend in the IPS data since 1970 using a linear model with no breaks. The best OLS model with no break in the trend of white enrollment decline is plotted in Figure 2.⁸ The estimated decline in enrollments is about 1743 white students per year over the interval 1970-1995. Visual inspection of Figure 2 indicates a non-linearity in the actual data that the linear model does not capture.

Consequently, I tried to find a model that produced a better fit to the data by allowing the estimated decline in enrollments to change at one point during the 1970-1995 interval. I estimated a series of such models for different break points and selected the ones which produced the best fits. The best fits of the models to the data occurred for breaks in the line near 1980. The model for a break at 1980 is plotted in Figure 3⁹ and it is

⁷ See Greene (1995:235-238).

⁸ The estimated regression is: Enrollment = 57011 - 1743.83t, R-square = .887, "t" is the number of years since 1970.

⁹ The estimated regression is: Enrollment = 65842.9 - 3404.24t + 2583.34d, R-square=.996, "t" is the number of years since 1970 and "d" is the number of years since 1980. The improvement in the fit to the data compared to the model of Figure 1 is statistically significant, $p < .01$. Little difference in the fit was found for breaks at 1978, 1979 or 1980, but model fit degraded substantially for other break points and was worse the farther the distance from 1980.

much better than the model of Figure 2. Not only does the model of Figure 3 appear visually to fit the data better, but it accounts for 99.6% of the variation in enrollments as compared to 88.7% for the model of Figure 2.

Based upon the model of Figure 3, the estimated white enrollment decline after 1970 was about 3400 students per year until 1980 and about 820 students per year after 1980.¹⁰ This is a very large, abrupt change in white enrollment decline. Furthermore, the change in the rate of white enrollment decline is in the opposite direction from that predicted by the sociological studies cited above that found links between white flight and desegregation policies.

I know of no other dramatic change in the economic or social environment of Marion County or IPS that could account for such an abrupt reduction in the IPS white enrollment decline starting in or near 1980 other than the desegregation plan that was implemented during the 1981-1982 school year and continued thereafter.¹¹ I interpret this result as strong inferential evidence that the desegregation policy implemented was effective in reducing IPS white enrollment declines.

How Could the Desegregation Policy have Reduced White Enrollment Declines in IPS?

The desegregation plan implemented by IPS in 1981-1982 had two components: (1) an intradistrict component that desegregated schools within the boundaries of IPS and (2) An interdistrict component that transported black students from IPS to six township districts

¹⁰ The rate before 1980 is the coefficient of t , which is -3404. The rate after 1980 is calculated by adding the coefficients of t and d , which is $2583 - 3404 = -821$, indicating a decline of 821 students per year.

¹¹ Welch and Light (1987, p. 86) report that IPS rezoned school attendance zones during the 1980-1981 school year that produced a drop in the dissimilarity index of 11 points.

(Decatur, Franklin, Lawrence, Perry, Warren, and Wayne) that were within the boundaries of Marion County, Indiana, and were defendants in the desegregation suit.

Tables 1 through 7 contain enrollment data by race for IPS and the six township districts for selected years between 1970 and 1993 for which data were available.¹² Table 1 indicates that the white enrollment declines in IPS were not matched by associated increases in white enrollments in the township districts. Franklin and Lawrence gained white enrollments between 1980 and 1993 but many fewer than the 12,000 white students that IPS lost during that period.¹³ The other township districts lost white enrollments during the period.

The enrollments of African American students including the students transferred for desegregative purposes are displayed in Table 2 and Table 5 shows African American enrollments assuming that no students were transferred. Similarly, Tables 3 and 6 show total enrollments with and without transfers of African American students from IPS to the six township districts. Tables 4 and 7 convert the African American enrollments of Tables 2 and 5 into percentages of the total enrollments found in Tables 3 and 6. If the desegregation plan had not transferred black students to the townships, only two of the six township districts (Lawrence and Warren) would have had student bodies with 10% or more black compositions by 1993. With the transfers, all of the township districts except Franklin had student bodies that were at least 10% black during the period 1980-1993.

¹² Department of Education Office for Civil Rights (OCR) data files provided the data for the years on and before 1984. The Department of Education annual Common Core of Data (CCD) data files was the source of the enrollment figures for 1987-1993. The estimates of the numbers of black students transferred from IPS to the township districts are based on the FTE values taken from the Indiana Department of Education Summary of Desegregation Claims for the years 1981 to 1993.

¹³ Lawrence and Franklin gained a total of 2976 white students between 1980 and 1993, whereas IPS lost 12,121 during that period.

Franklin's percentage was above 10% between 1982 and 1989, but dropped slightly below 10% in 1990.

It is possible that the higher proportions of African Americans in the township districts caused by the transfers of black students from IPS could have reduced the value of the township districts as a white enclave. In the absence of transfers, Decatur, Franklin, and Perry districts would have been 99% white or more. Without transfers from IPS, the near absence of blacks in these three districts and the lower percentages of blacks in all of the six township districts would have increased the isolation of black students in IPS and increased the perception of whites and blacks in Marion County that IPS was the district that African Americans were "supposed" to attend.

Table 7 indicates that Lawrence and Warren would have student populations that were at least 10% black in the absence of transfers, but the transfers may have made these two townships more attractive to potential African American in-migrants. Many African American prefer to live in integrated neighborhoods, but are reluctant to move to neighborhoods that are all or nearly all white (Massey and Denton 1993). Similarly, schools that already have substantial African American populations would be more attractive to some African American in-migrants than schools with only token black percentages.

Whereas the interdistrict component of the desegregation plan may have produced the abrupt change in IPS white enrollment decline, the intradistrict component probably did not produce that change. The intradistrict component of the desegregation plan increased the exposure of whites to blacks as it increased the exposure of blacks to whites and diminished dissimilarity among schools (see Table 10). Tables provided as part of the

Declaration by Dr. Esperanza Zendejas indicate that dissimilarity dropped below .2 by 1993 indicating that the Exposure of Whites to Blacks was even higher in 1995 than the .473 recorded in Table 10 in 1990.¹⁴ Research on the effects of desegregation actions on white enrollment patterns indicate that increasing black proportions in the public schools seldom if ever attract white students but often leads to white enrollment declines instead.¹⁵ Welch and Light (1987, p. 62) report in their study of 116 districts that implemented major desegregation plans between 1967 and 1985, that most of the districts "experienced reductions in white enrollment during the period studied and losses of white students usually accelerate when desegregation plans are introduced." The interdistrict component of the plan that transported students from IPS to the six township districts could explain why the patterns in Indianapolis depart from the typical trends in public school desegregation cases.

¹⁴ The Declaration by Zendejas did not appear to report the exposure of whites to blacks.

¹⁵ See for example the citations in note 1 above.

References

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Table 1. White Public School Enrollments by Year (OCR data prior to 1986, CCD data after 1986)							
Year	Decatur	Franklin	IPS	Lawrence	Perry	Warren	Wayne
1970	4488	2575	67772	9420	13004	9828	12229
1980	4382	3248	32596	7444	10432	8567	10615
1982	4259	3335	29368		9562		
1984		3402	28151	6628	9230		9896
1987	4427	3756	25424	7463	9542	7122	9796
1988	4484	3775	24885	7603	9849	7113	9491
1989	4400	3885	23787	8108	9839	6969	9597
1990	4464	4085	22944	8374	9888	7069	9688
1991	4405	4120	21960	8883	10013	7084	9659
1992	4413	4085	21398	9210	9959	6979	9769
1993	4375	4140	20475	9528	9963	6995	9658

Table 2. Black Public School Enrollments by Year (OCR data prior to 1986, CCD data after 1986)							
Year	Decatur	Franklin	IPS	Lawrence	Perry	Warren	Wayne
1970	2	17	38044	75	14	12	146
1980	38	15	32799	962	62	324	241
1982	634	435	25436		1687		
1984		459	24351	1920	1728		2096
1987	672	477	24429	1966	1549	2073	2091
1988	639	469	24726	2054	1595	2013	2213
1989	648	446	24376	2220	1503	1936	2294
1990	671	385	24577	2322	1407	1971	2311
1991	726	413	24458	2433	1431	2102	2334
1992	626	371	24649	2708	1320	2159	2389
1993	618	373	25376	2915	1239	2167	2426

Table 3. Total Public School Enrollments by Year (OCR data prior to 1986, CCD data after 1986)							
Year	Decatur	Franklin	IPS	Lawrence	Perry	Warren	Wayne
1970	4495	2593	106239	9571	13059	9862	12451
1980	4464	3299	65958	8660	10688	9024	10975
1982	4942	3811	55439		11396		
1984		3901	53087	8813	11090		12118
1987	5146	4279	50496	9725	11235	9337	12066
1988	5153	4290	50214	9966	11613	9277	11912
1989	5086	4366	48805	10661	11499	9058	12082
1990	5180	4527	48140	11066	11464	9172	12229
1991	5179	4591	47136	11710	11603	9336	12237
1992	5084	4523	46698	12360	11454	9320	12399
1993	5050	4579	46656	12908	11388	9355	12384

Table 4. Percent Black of Public School Enrollments by Year (OCR data prior to 1986, CCD data after 1986)							
Year	Decatur	Franklin	IPS	Lawrence	Perry	Warren	Wayne
1970	0.0	0.7	35.8	0.8	0.1	0.1	1.2
1980	0.9	0.5	49.7	11.1	0.6	3.6	2.2
1982	12.8	11.4	45.9		14.8		
1984		11.8	45.9	21.8	15.6		17.3
1987	13.1	11.1	48.4	20.2	13.8	22.2	17.3
1988	12.4	10.9	49.2	20.6	13.7	21.7	18.6
1989	12.7	10.2	49.9	20.8	13.1	21.4	19.0
1990	13.0	8.5	51.1	21.0	12.3	21.5	18.9
1991	14.0	9.0	51.9	20.8	12.3	22.5	19.1
1992	12.3	8.2	52.8	21.9	11.5	23.2	19.3
1993	12.2	8.1	54.4	22.6	10.9	23.2	19.6

Table 5. Estimated Black Public School Enrollments by Year Without Transfers (OCR data prior to 1986, CCD data after 1986)							
Year	Decatur	Franklin	IPS	Lawrence	Perry	Warren	Wayne
1970*	2	17	38044	75	14	12	146
1980*	38	15	32799	962	62	324	241
1982	0	3	31574		70		
1984		11	31107	1311	33		311
1987	3	8	30813	1388	10	616	418
1988	57	29	30838	1531	136	695	423
1989	52	8	30343	1692	119	731	477
1990	70	0	30462	1810	103	734	494
1991	118	23	30365	1937	3	864	588
1992	25	0	30352	2202	77	967	625
1993	33	0	30771	2427	63	1070	750

*Actual enrollments from Table 2.

Table 6. Estimated Total Public School Enrollments by Year Without Student Transfers (OCR data prior to 1986, CCD data after 1986)							
Year	Decatur	Franklin	IPS	Lawrence	Perry	Warren	Wayne
1970*	4495	2593	106239	9571	13059	9862	12451
1980*	4464	3299	65958	8660	10688	9024	10975
1982	4282	3379	61577		9779		
1984		3453	59843	8204	9395		10333
1987	4477	3810	56880	9147	9696	7880	10393
1988	4571	3850	56326	9443	10154	7959	10122
1989	4490	3928	54772	10133	10115	7853	10265
1990	4579	4113	54025	10554	10160	7935	10412
1991	4571	4201	53043	11214	10175	8098	10491
1992	4483	4124	52401	11854	10211	8128	10635
1993	4465	4205	52051	12420	10212	8258	10708

*Actual enrollments from Table 3.

Table 7. Estimated Percent Black of Public School Enrollments by Year Without Transfers (OCR data prior to 1986, CCD data after 1986)							
Year	Decatur	Franklin	IPS	Lawrence	Perry	Warren	Wayne
1970*	0.0	0.7	35.8	0.8	0.1	0.1	1.2
1980*	0.9	0.5	49.7	11.1	0.6	3.6	2.2
1982	0.0	0.1	51.3		0.7		3.0
1984		0.3	52.0	16.0	0.4	7.8	4.0
1987	0.1	0.2	54.2	15.2	0.1	8.7	4.2
1988	1.2	0.8	54.7	16.2	1.3	9.3	4.6
1989	1.2	0.2	55.4	16.7	1.2	9.3	4.7
1990	1.5	0.0	56.4	17.2	1.0	10.7	5.6
1991	2.6	0.5	57.2	17.3	0.0	11.9	5.9
1992	0.6	0.0	57.9	18.6	0.8	13.0	7.0
1993	0.7	0.0	59.1	19.5	0.6		

*Actual percentages from Table 3.

Table 8. Total School Enrollments (Public + Private) and Private School Enrollments (U.S. Census Data)							
Year	Decatur	Franklin	IPS	Lawrence	Perry	Warren	Wayne
1970 Total	4,229	3,038	118,810	13,782	15,828	13,406	8,289
1970 Private	154	519	13,569	1,296	297	1,686	855
1980 Total	4,697	3,912	78,229	10,686	13,064	10,253	12,721
1980 Private	333	665	10,805	1,250	2,405	1,010	852
1990 Total	4,534	4,854	62,461	12,121	11,959	8,289	10,863
1990 Private	246	929	9,596	2,351	2,400	1,068	944
1990 Private (%Black)	0%	0%	25%	6%	0%	1%	4%

Table 9. Population Totals (% Black in parentheses) (U.S. Census Data)							
Year	Decatur	Franklin	IPS	Lawrence	Perry	Warren	Wayne
1970	14,001 (0%)	9,927 (<1%)	515,051 (25%)	55786 (1%)	64,506 (<1%)	50,045 (1%)	54,127 (2%)
1980	19,426 (<1%)	15,537 (<1%)	383,594 (34%)	51332 (13%)	63,669 (<1%)	46,519 (3%)	63,655 (2%)
1990	21,092 (1%)	20,604 (<1%)	355,769 (38%)	67712 (10%)	69,694 (<1%)	48,004 (5%)	63,933 (3%)

Table 10. Segregation Trends in the Indianapolis Public Schools: 1970, 1980, 1990. (OCR data prior to 1986; CCD data after 1986)			
Segregation Measure	1970	1980	1990
Index of Dissimilarity	0.727	0.361	0.235
Exposure Whites to Blacks	0.131	0.396	0.473
Blacks to Whites	0.233	0.394	0.444