

Florida Public Schools State-Level Trends

New Students, Leavers, and
Natural Increase
1992 -2008

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Office of Economic and Demographic Research, Florida Legislature

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I. Scope

This report covers the trends in state-level enrollment¹ growth for Florida's public schools from the 1992² school year through the 2008 school year. Trends for individual school districts may differ from the state-level trends.

Enrollment changes are driven by two demographic components:

- *Natural Increase* which is the difference in enrollment between the entry grade (kindergarten) and the previous year's exit grade (grade 12) and
- *Net Migration* for the system includes net migration of school-age population, changes in educational placement (public, private, and home education) within Florida and students who drop out of school.

The total time interval from 1992 through 2008 is split into three time periods based on availability of data and the enrollment growth trends:

- From 1992 through 1999;
- From 1999 through 2003;
- From 2003 through 2008.

The changes in the enrollment and the demographic components are discussed for each time period.

¹ The enrollment measure in this report is regular ten full-time equivalent (FTE) student membership, except where otherwise stated. See the definitions section for the definition of FTE membership.

² The 1992 school year refers to the 1991-92 school year.

II. Definitions

- *First year*: the first year of the two-year time period used for the net migration estimate. Example: For the net migration estimate for the period 2005 to 2006, the year 2005 is the first year.
- *Second year*: the second year of the two-year time period. Example: 2006 in the time period 2005 through 2006.
- *Leavers*: Grades K-11 students enrolled in the first year of the two-year time period who were not enrolled in the second year of the time period.
- *New Students*: Grades 1-12 students enrolled in the second year of the two-year time period who were not enrolled in the first year of the time period.

Note: *New Students* and *Leavers* reflect children moving in and out of non-public school environments in Florida and dropout students, as well as students moving between Florida and other states (including territories, etc.) and countries.

- *Continuing Students*: Grades K-11 students enrolled in the first year of the two-year time period who were also enrolled in the second year of the time period.
- *Regular Term Full-Time Equivalent (FTE) Membership*: FTE earned during the 180-day school year (excludes FTE earned in the summer term) for the 67 regular school districts (excludes FTE for special districts: Washington Special District, the university lab schools, and the Florida Virtual School). Full-time equivalency means that one FTE represents one student enrolled full-time for both the October and February Surveys. Thus, 30 students enrolled full-time only for the October survey and absent during the February survey generates 15 FTE; the FTE enrollment for these 30 students for half the year is equivalent to that of 15 students enrolled for the entire 180-day school year.
- *Natural Increase*: the difference between the incoming first-time kindergarten FTE enrollment (second year) and the outgoing grade twelve FTE enrollment (first year). This variable was calculated by subtracting first year grade 12 FTE enrollment and kindergarten

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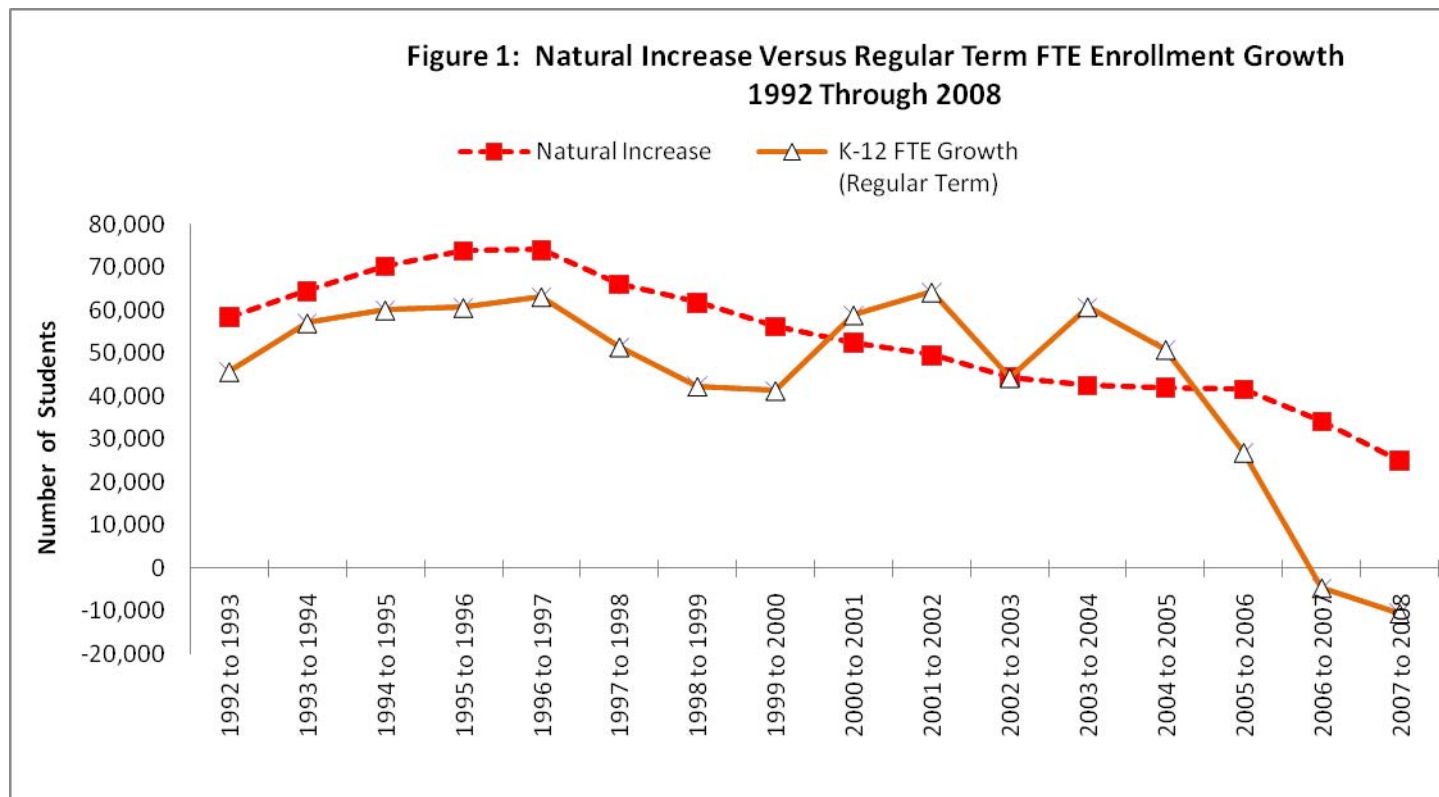
students not promoted to grade one from the second year kindergarten FTE enrollment. This concept is equivalent to the population concept of natural increase (births minus deaths).

- *Net Migration: New Students in year 2 minus Leavers in year 1.*
- *Sum of Enrollment Components: Natural Increase + Net Migration.*

These effects in this report are state-level effects. Students enrolled in both years of the two-year time period who move among school districts are counted as Continuing Students although they may be leavers for one or more school districts and new students for one or more school districts. Thus, school district trends may differ from the state level. Also the relative importance of net migration and of natural increase for a specific district may differ from state trends.

III. Results

A. Natural Increase versus Enrollment Growth



Enrollment growth for Florida public schools:

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- Rose and fell between the 1992 and the 2000 school years peaking in 1996,
- Increased sharply in the 2001 school year staying at higher levels through the 2004 school year (except for 2003) and
- Decreased dramatically from 2004 through 2008.

Natural Increase for Florida public schools:

- Rose and fell from the 1992 through the 2008 school years peaking in 1996,
- Was lower than the enrollment growth from the 2001 through the 2004 school years and
- Decreased dramatically in the 2007 and 2008 school years.

The variation in natural increase adequately explains the fluctuation in enrollment growth from the 1992 through the 2000 school years, but does not fully explain the trends beginning in the 2001 school year. Thus, the growth in 2001, the higher enrollment levels through 2004 and the decrease in enrollment growth beginning in the 2004 school year appear to be affected by net migration in addition to natural increase.

B. Net Migration

1. New Students and Leavers from 2003 through 2008

- The number of students who annually left the public school system (leavers) increased over 26,000 students from the 2003 through the 2007 school year.
- The number of new students annually entering the public school system decreased over 34,000 students from the 2004 through the 2008 school year.
- The net migration effect of students moving into and out of the system can be estimated by subtracting the *Leavers* from the *New Students* for each two-year time period. The difference was 66,448 students in the 2003 to 2004 time period decreasing to 5,339 students in the 2007 to 2008 time period.

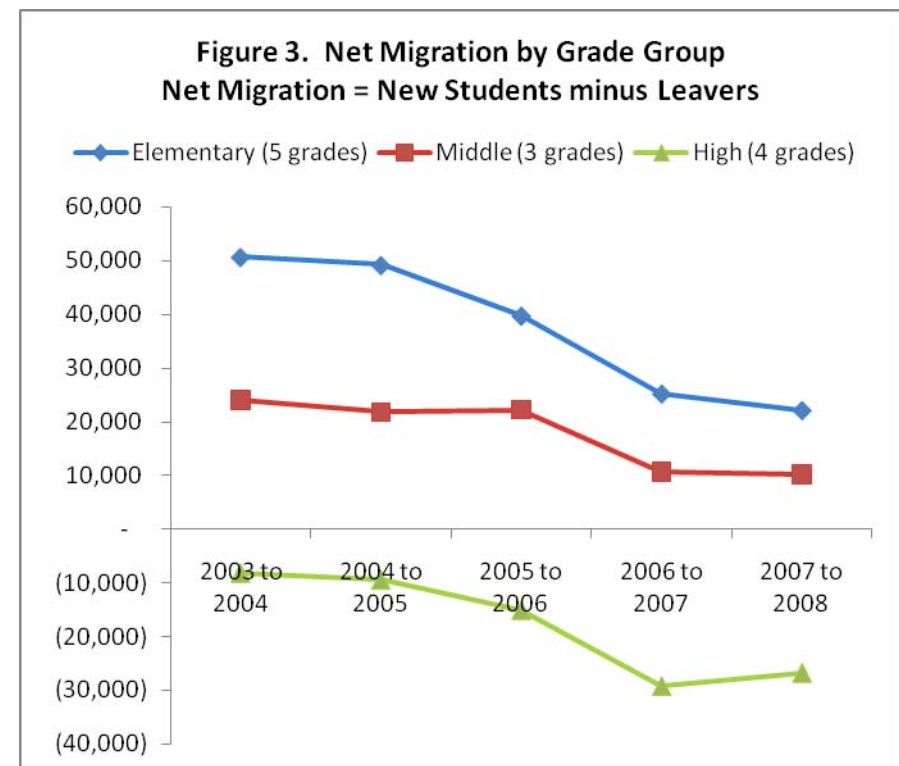
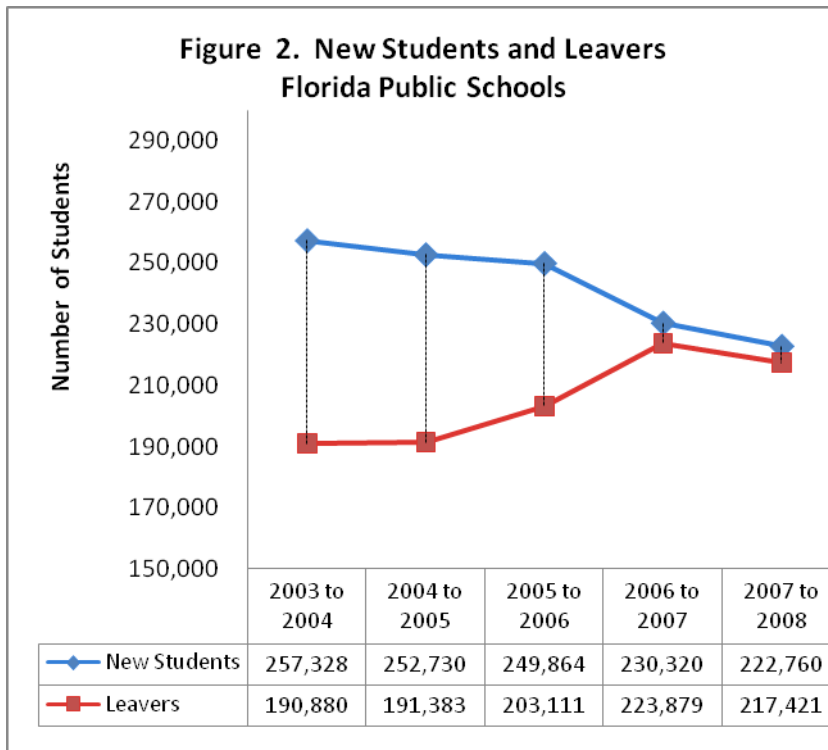
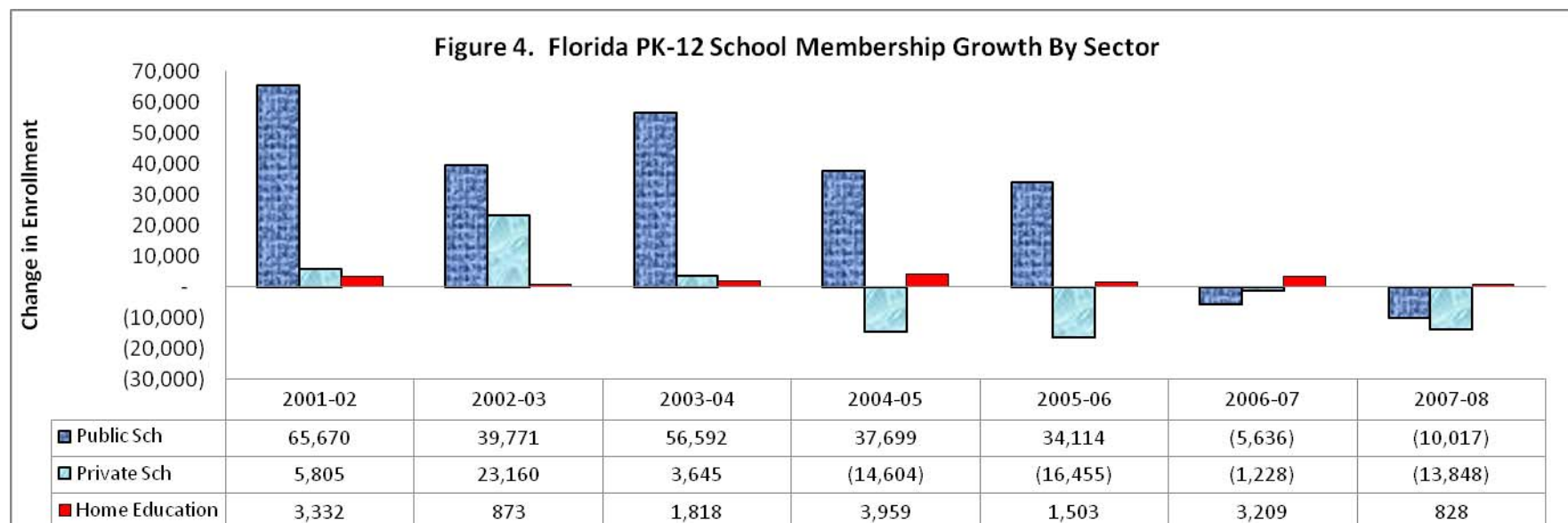


Figure 2 displays the increase in *Leavers* and the decrease in *New Students* since 2003. Figure 3 shows the decrease in net migration has occurred at all three grade levels (elementary, middle school, and high school).

2. Educational Placement: Public versus Nonpublic Sectors

One component of the public school net migration estimate is migration into and out of the nonpublic sector (private schools and home education). The decrease in membership growth for public schools since 2004 is not due to net migration into and out of the nonpublic sector since the private school sector which is the primary component of the nonpublic sector is experiencing similar trends as public school enrollment. Home Education is the only sector to have membership increases from 2002 through 2008. The decrease in public school membership growth for 2003 and the increase in private school membership growth for 2003 are primarily due to the beginning of the Corporate Income Tax Credit Scholarship Program.



Data Sources for figure 4 are:

public schools: <http://www.fldoe.org/eias/eiaspubs/default.asp#student> ;

private schools: http://www.floridaschoolchoice.org/Information/Private_Schools/annual_reports/07-08.pdf ;

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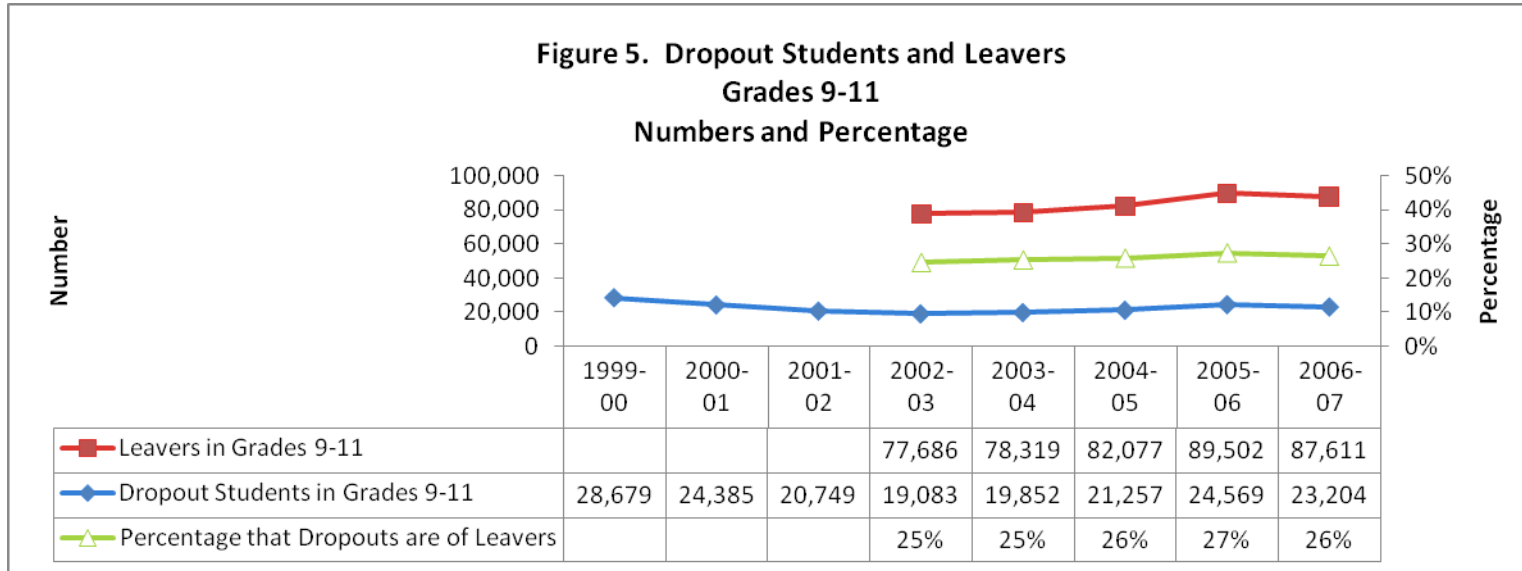
home education: https://www.floridaschoolchoice.org/information/home_education/files/08_Annual_Report.pdf .

3. Leavers and Public School Students Who Drop Out of School (Grades 9-11)

Another component of net public school migration is the number of grades 9-12 students who drop out of school. Dropout students are only in grades 9-12 because of compulsory attendance requirements.

From 2003 to 2007 the dropout students in grades 9-11 accounted for about 26 percent of the grades 9-11 leavers. The number of *Leavers*, the number of dropout students, and the percentage of dropout students to all *Leavers* peaked in 2006. The increase in *Leavers* in grades 9-11 from 2003 to 2006 was 9,925 students; the increase in dropout students in grades 9-11 was 4,121 students. Thus, from 2003 to 2006, the number of dropout students accounted for about 42 percent of the increase in grades 9-11 *Leavers* and 16 percent of the increase in grades K-11 *Leavers*. The *Leavers* and the number of dropout students both decreased slightly in 2007.

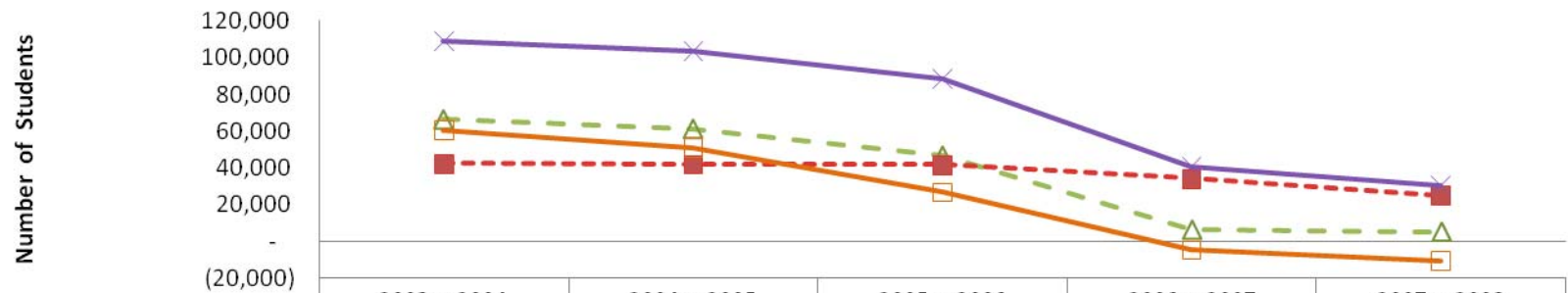
The numbers of *Leavers* prior to 2003 is unknown and it is unknown whether the number of Leavers increased or decreased. If the relationship since 2003 is valid for the time period from 2000 to 2003, the decrease in dropout students would “explain” about 23,000 of a decrease in *Leavers* during that time period.



C. FTE Growth and Demographic Components from 2003 through 2008

- FTE growth was over 60,000 FTE students in 2004 compared with a decline of more than 10,000 FTE students in 2008. Thus, the range of annual FTE growth over this time period was about 70,000 students.
- *Natural increase* varied only 17,000 students in the same time period.
- *New Students Minus Leavers* varied slightly over 60,000 students in the same time period.
- *The Sum of Enrollment Components* varied about 79,000 students in the same time period and the shape of the graphed line matches that of FTE growth. Thus, Sum of Enrollment Components “explains” the variation in FTE with the variation in *New Students Minus Leavers* contributing more to the variation in FTE than did the variation in *Natural Increase*.
- The sum of enrollment components is higher than the FTE enrollment growth because students who leave or enter may not be counted as a full FTE if they were not enrolled for the full school year. For example, a student who leaves after the first half of the school year would be counted as one leaver, but .5 FTE.

Figure 6: PK-12 Public Schools Demographic Components Versus Regular Term FTE Growth 2002-03 Through 2007-08

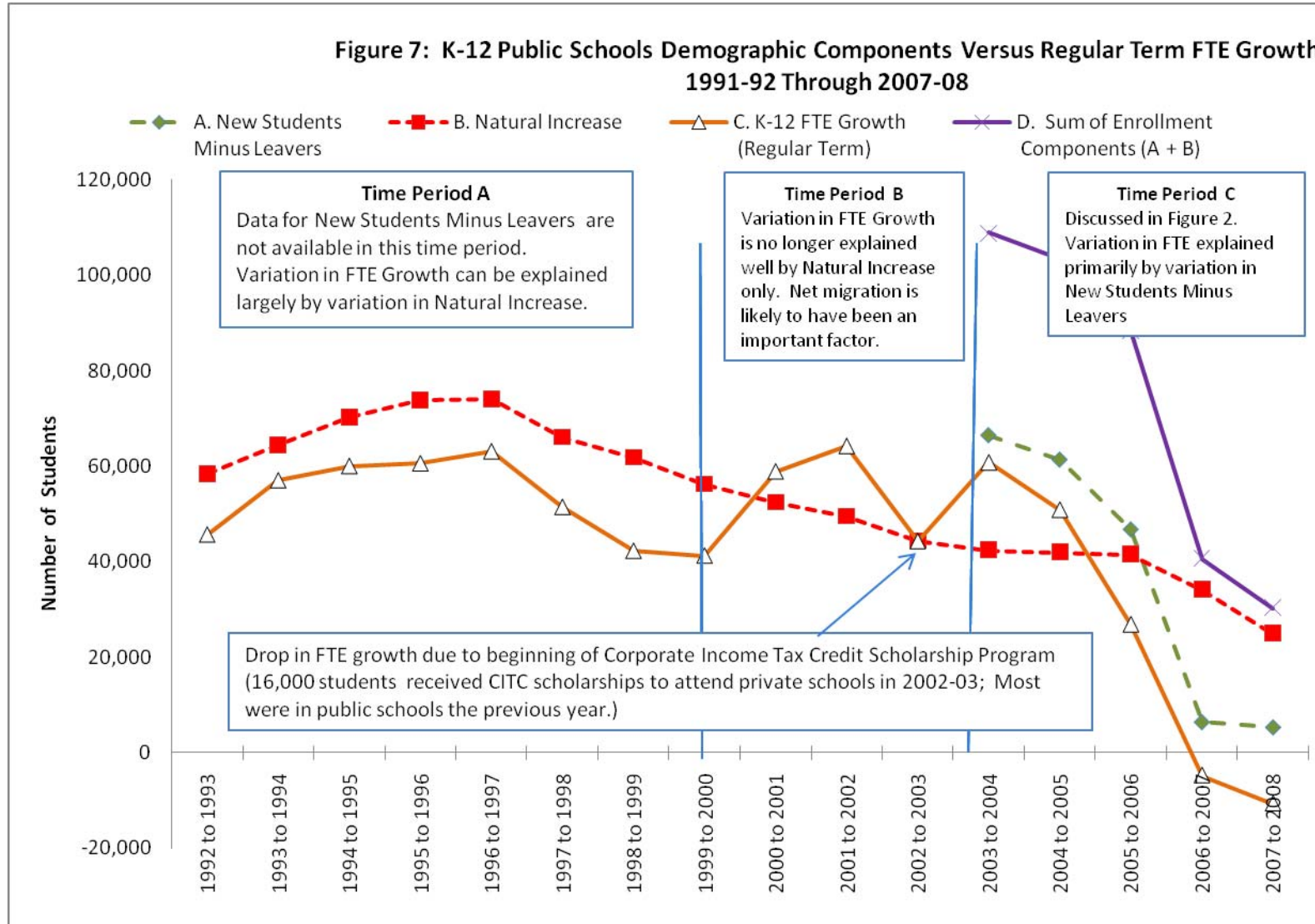


	2003 to 2004	2004 to 2005	2005 to 2006	2006 to 2007	2007 to 2008
—△— A. New Students Minus Leavers	66,448	61,347	46,753	6,441	5,339
-■- B. Natural Increase	42,417	41,964	41,543	34,157	24,920
—□— C. K-12 FTE Growth (Regular Term)	60,757	50,845	26,846	(4,726)	(10,647)
—×— D. Sum of Enrollment Components (A + B)	108,865	103,311	88,296	40,598	30,259

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D. FTE Growth and Demographic Components from 1992 through 2008

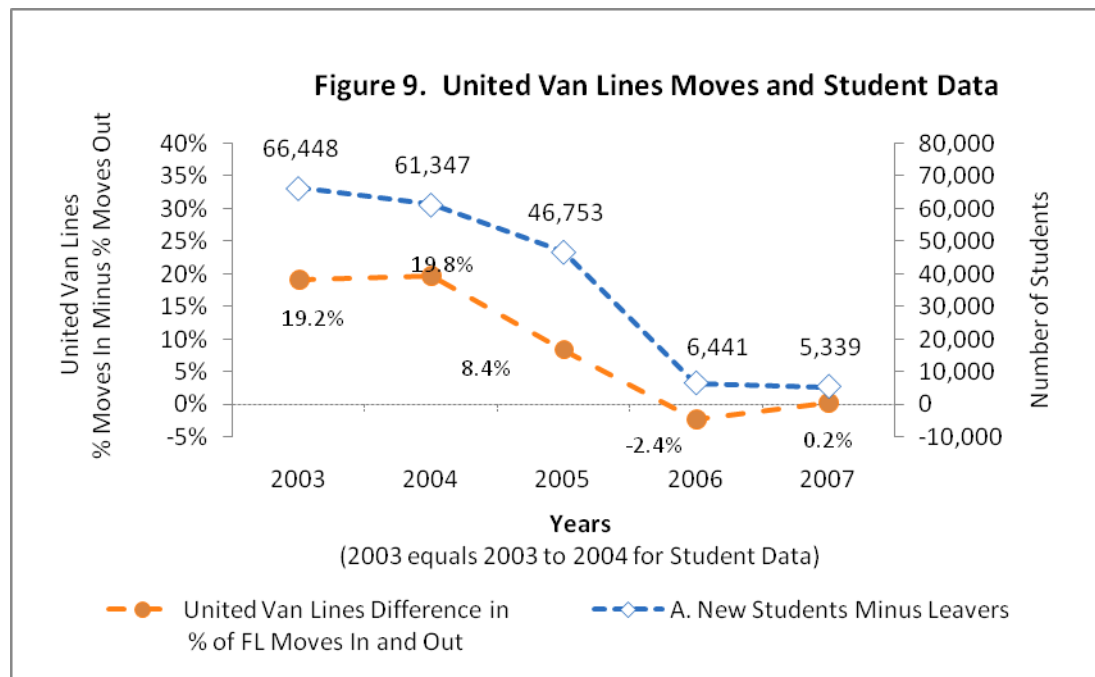
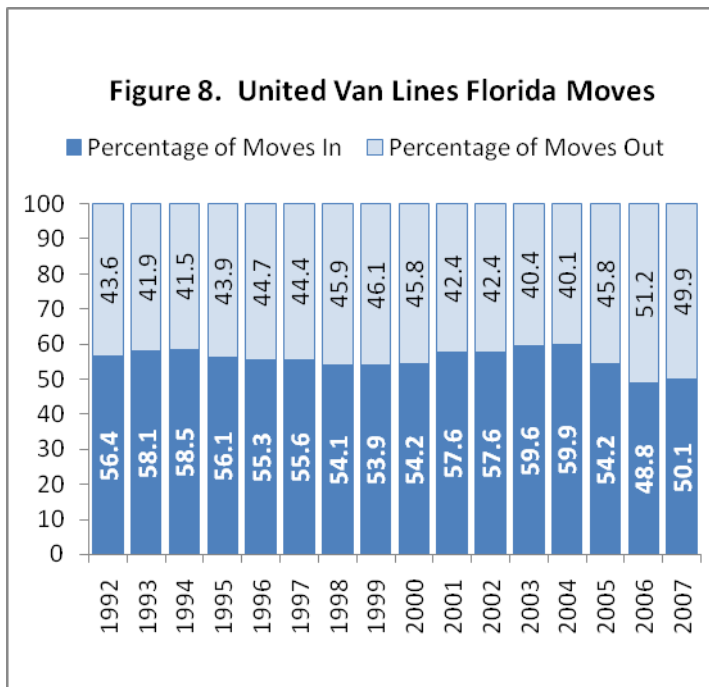
Figure 7: K-12 Public Schools Demographic Components Versus Regular Term FTE Growth 1991-92 Through 2007-08



E. Other Data Sources

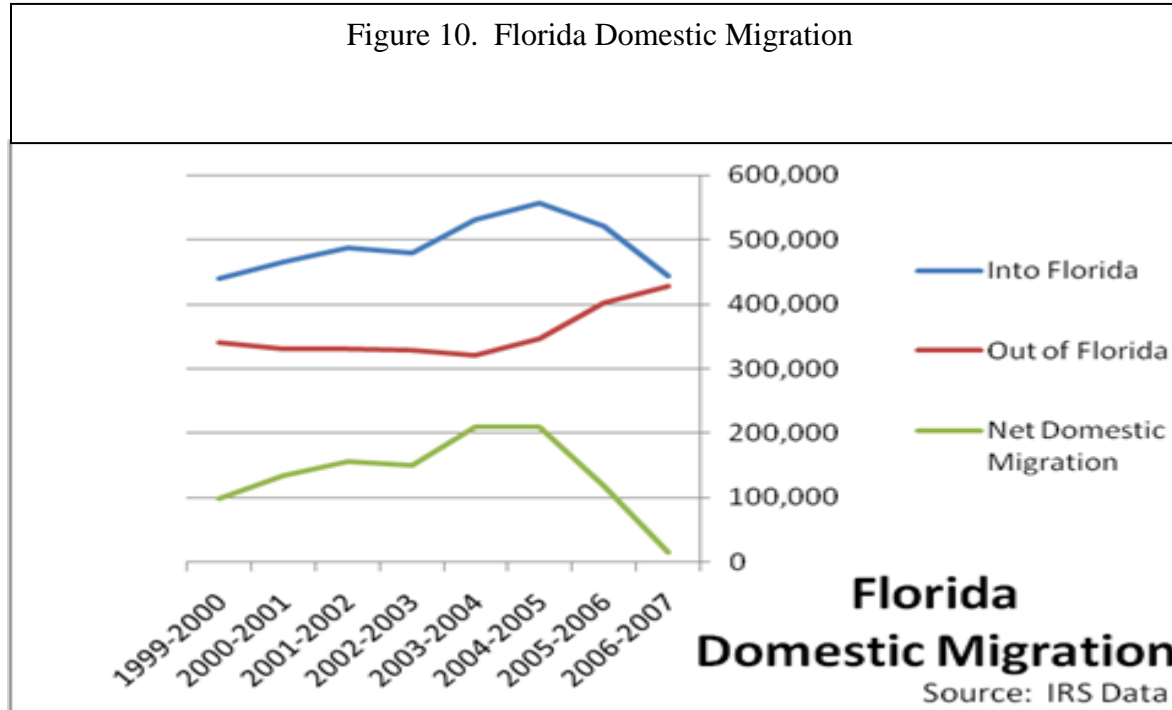
1. United Van Lines

The moving company United Van Lines keeps records of the annual domestic moves into Florida and the moves out of Florida. The trend in percentage of moves in and out of Florida by this moving company is consistent with the students trends described above. The data support the conclusion that the net migration into and out of the state is a primary component of public school system net migration. See Figures 8-9.



Data source for United Van Lines data used for Figures 8 and 9 is Jennifer_Bonham@unigroupinc.com.

2. Internal Revenue Data (IRS)



Domestic migration estimates from IRS records show similar trends to the net migration into and out of Florida public schools indicating that domestic migration (moves with U.S. areas) is a primary factor for the public school trends.

IV. Conclusion

A. From 1992 through 1999

- Natural increase adequately explains the variation in enrollment growth during these years. While data are not available, it can be inferred that net migration and the number of dropout students in grades 9-12 either had patterns that were similar to the natural increase pattern, patterns that were opposite to each other (cancelling each other out), or patterns that had little variation.

B. From 1999 through 2003

- It is likely that net migration played a major part in the increase in enrollment growth from the 2000 school year through the 2003 school year. The increase in net migration for the first three years could be the result of more students entering, fewer students leaving or both occurring at the same time. It is unknown whether this net migration increase was due to school-age children moving into or out-of the state or to changes in educational placement in the state.
- The 2003 drop in school enrollment was likely due to the beginning of the Corporate Income Tax Credit Scholarship Program.

C. From 2003 through 2008

- The primary factor for the decrease in enrollment growth since 2003-04 was a decrease in net migration. Net migration includes moves into and out of the state as well as changes in the educational placement within the state (private schools, home schools, and students who drop out of school).
 - Net domestic migration was a significant component of net migration.
 - The number of dropout students was a major factor in the net migration of high school grades.
- Natural increase was only a small part of the decline in the enrollment growth.

V. Methodology

All grades K-11 students in the first year of the two-year time period were matched with all students in grades K-12 in the second year. *Leavers* were the unmatched students enrolled in the first year. *New students* were grades 1-12 students in the second year of the time period who were unmatched.

The data were all student records from the prior school attendance format for the school year (survey 5 data). Thus, a *Leaver* was enrolled at least one day in the first year of the time period and was not enrolled in any of the 12 months of the second year of the time period. A *New Student* was enrolled in at least one day of the second school year and was not enrolled in any of the 12 months of the first year of the time period.

VI. Technical notes

Before matching between years, student records were matched within a year to get unique students. All matches were done two ways: first with id and birth date; second with birth date, last name, and first name.

The mismatch error of not matching students when a match should have been made affects the analysis by inflating both the *Leavers* and the *New Students*. That is, if a student was enrolled in both years and the two records for this student were not matched, then the student will have one record as a *Leaver* and one record as a *New Student*. However, the measure *New Students Minus Leavers* is not affected by this type of mismatch error since this error would be eliminated by the calculation of subtraction of *Leavers* from *New Students*.

The mismatch error of matching two or more unique students affects the analysis by deflating either the *Leavers* or *New Students* or both. The mismatch of a *Leaver* and a *New Student* will not be present in the measure *New Students minus Leavers*. The mismatch of a *Leaver* with a *Continuing Student* will not necessarily balance with the mismatch of a *New Student* with a *Continuing Student*. However, the good fit of the measure Sum of Enrollment Components to the FTE growth suggests that these mismatches are fairly balanced.