Sub-district school enrollment projections using student level records: An application to Santa Barbara City Schools

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ABSTRACT

School districts throughout California are struggling with uncertainty in primary school enrollment levels. Some areas of the state are witnessing soaring enrollment levels due to immigration while other areas with expensive housing stock and aging populations are expected to decline. State level budget problems, the increasing popularity home/private schooling, and school choice laws at the local level have resulted in extreme uncertainty about the expected enrollment levels at individual schools in some district. Santa Barbara city schools provide an excellent example of enrollment instability and the costs associated with poor enrollment forecasts. The associated costs include consternation among employees due to last minute hires or reassignments, community unrest as school closures are threatened or carried out, and ineffective capital planning/allocation. The Santa Barbara district is also highly segregated and there are some indications of 'white flight' from Latino dominated schools. This research uses student level records from the Santa Barbara city schools to evaluate the nature of the instability in past enrollment forecasts. We also evaluate several alternative projection models which account for inter- and intra-district transfers. The work is relatively unique in attempting school level, rather than district level, forecasts. We close the paper with comments on the nature of instabilities in sub-district level employment forecasts.

OVERVIEW

As will be described in more detail below, the history of the Santa Barbara City School System has been characterized by a long-standing debate concerning the ethnic composition, and implied educational equity, of individual schools. More recently, declining enrollment and the potential redistribution of school resources is introducing further instability into an already delicate political and social situation. The neighborhood dynamics and demographic processes that ultimately are manifest in the spatial distribution and ethnic composition of school catchment zones are certainly complex. In contrast, standard enrollment forecasting methods are geared towards characterizing more routine and stable trends in social processes. The current forecasting methods used by the Santa Barbara city schools perform adequately in gauging the level of overall district enrollment but do not work well at the individual school level. We propose to develop an alternative enrollment forecasting method that will be attuned to the neighborhood and household level dynamics that impact individuals schools. The finer spatial resolution will be achieved by using detailed enrollment records, county assessor records, and recent block level data from the 2000 census.

The current educational system seems to reinforce the problems of the most disadvantaged populations in the community. Improved forecasting models will not only promote better capital facilities planning but should also lead to a better understanding of the processes which have historically manifested as inequities in the educational system. As such, the improved models should also point the way towards resolving those inequities.

The next section provides a succinct statement of the general research objectives. Following that a rather lengthy background details the predominant issues in the Santa Barbara City School System and review alternative methods of forecasting. We feel the that the history section, in particular, is necessary to accentuate the long-term nature of the issues in the local school system. The fourth section provides a description of our methodology.

RESEARCH OBJECTIVES

- To develop and test an enrollment forecasting model that uses detailed, spatially-referenced household and demographic data to account for the unique housing and neighborhood dynamics characteristic of Santa Barbara city schools. Currently the school system uses a modified cohort forecasting model with little attention to housing issues except new units.

- To use the forecasting model to depict possible trends in ethnic segregation patterns in the Santa Barbara City School System.

- To use the forecasting model to inform capital and social planning for the Santa Barbara City Schools and to compare our results to the existing forecasts that are based upon a modified cohort model.

BACKGROUND

A Brief History of the Santa Barbara City Schools

The role of race in education began in 1896, when U.S. Supreme Court ruled in *Plessy v. Ferguson* that the state of Louisiana had the right to require "separate but equal" railroad cars for blacks and whites. The implications of this ruling were that many schools in the south applied laws that required racial segregation in schools. It was not until the *Brown v. Board of Education of Topeka Kansas* lawsuit in 1954 that the courts agreed that segregated schools were "inherently unequal" and must be abolished. This ruling, along with the Civil Rights Act of 1964, and the Elementary and Secondary Education Act of 1965, made it illegal to provide unequal education to students due to race.

Although the courts established that segregation was illegal, there were few obvious solutions to achieving a more equitable racial balance. Many cities that did not have explicit laws mandating segregation did not consider themselves to be in violation of the new civil rights acts. This was the case in Santa Barbara in the mid 1960s. In an article in the Santa Barbara News Press from September 7, 1966, the school system was warned by the state government that they may be guilty of de facto segregation. The article reports that three of its schools have higher than average percentages of minority students. These schools are Franklin (86.5% minority), Lincoln (93.9% minority) and Cleveland (38% minority). Later articles in 1966 and early 1967 focus on the "harmony" that exists amongst races in Santa Barbara, and the desire of the residents to keep their schools from being changed. One point that is contested during this time is the reported number of minority students. The race and ethnicity of students in the 1960s was only determined by surnames. Because of this, a recurring theme within the Santa Barbara debate is the number of "true" minorities that are present. The side most resistant to changes in racial distributions often cites the inefficient racial classifying system as over-reporting the number of minority students enrolled in the school system.

In early 1968 then school superintendent Norman Scharer invited a team from the State Department of Education to visit and make recommendations concerning improvements in racial and ethnic balance. The Santa Barbara School District (SBSD) had already developed its own plan for integrating the school system, which was to be implemented in the fall of 1968. According to the plan, Franklin, Lincoln and Roosevelt elementary schools were to be reorganized by changing the arrangement of grade levels in each school. With the invitation of the state team to SBSD came the realization that the current master plan would probably not be implemented without busing. These community "fears" were well founded. Though the Department of Education had developed few guidelines for integration, they required that each school should have a minority population within fifteen percent of the district average. SBSD's master plan to rearrange Franklin, Lincoln and Roosevelt to achieve greater racial integration did not meet these state standards.

By 1969 there was still little done within the SBSD to change the racial and ethnic imbalance. In this year, an attempt was made to have the imbalance remedy itself by creating a system of open enrollment within the school district. In addition, the SBSD "paired" schools' transportation programs rather than bus students to completely different schools. Under this plan, Wilson and Washington, Lincoln and Roosevelt, Franklin and Jefferson, Peabody and Adams, Santa Barbara Junior High and La Colina Junior High and Santa Barbara High School and San Marcos High would exchange students between each pair of schools in order to help achieve racial balance. This solution was temporary, and three years later yet another solution to achieve racial and ethnic balance was being considered.

At the beginning of 1972, the state determined that nine elementary schools and two secondary schools were racially and ethnically out of balance. Plans to remedy the imbalance were numerous; by mid April there were five plans being seriously considered by the board of education. Though each plan was based on boundary changes and busing, the plans differed in the time it took to achieve racial balance and the balances between busing and boundary changes. After many meetings and much debate, a decision was made in May of 1972, to be implemented September 11, 1972. This plan involved closing two elementary schools (out of thirteen) and transferring a total of 1,319 students to new schools. Of this total, 503 students were to be bused who had not been bused under the status quo. Of the two elementary schools to be closed, Jefferson was considered to be unsafe, and Garfield was to be used as a special education center.

Due to the decision to close Jefferson and Garfield, there was a lawsuit filed against the SBSD on behalf of two citizens. A local judge ruled against the school district and determined that the school system should consider plans for integration without requiring school closures. At the same time, Proposition 21 passed through the California House of Representatives, prohibiting busing as a means of integration. Because the lawsuit brought against SBSD dealt with busing as part of desegregation, the California Supreme Court chose this case as a test case for desegregation. Although the Court did not immediately set a trial date, the SBSD was allowed to implement its integration plan at the beginning of the new school year. In November of 1972, the state Supreme Court ruled in favor of SBSD, finding that the efforts made towards integration in Santa Barbara set an example that other districts should follow.

Problems involving racial and ethnic tensions emerged again in the late 1970s. Across the nation, many states passed measures to freeze property taxes. The result was that state funding for schools became dependent upon the number of children attending the school, and not revenue from local property taxes. White flight was already occurring due to mainly middle class residents moving to the suburbs and increased enrollment in private schools, which meant decreasing money for the schools in the SBSD. The result of a growing suburbia and increased private school enrollment was also contributed to an increasingly segregated school system despite past attempts of integration. As a solution, three elementary schools that had particularly high minority enrollments were to be closed, and the students were to be bused to other schools in order to attain better racial and ethnic distribution. Because of this, a constituency of predominantly Hispanic parents and community activists sued the school in an attempt to reverse the decisions to close Lincoln, Wilson and McKinley elementary schools. When school superintendent David Thomas appeared in court, he admitted that fears of "white flight" from the school district was part of the decision to close Lincoln and Wilson elementary schools, with predominantly minority students, rather than Roosevelt, with predominantly Anglo students. When Roosevelt and Lincoln were "paired" to enhance integration, parents of some Anglo students decided to send their children to private schools. If Roosevelt were to be closed, Anglo students would be bused to schools where there were high minority enrollments, which could lead to parents again deciding to attend private rather than public schools. By choosing to close schools with high minority enrollments and bus these children to schools with higher Anglo enrollments, the school district was hoping to retain as many students as possible. The judge ruled in favor of the SBSD, but the issue arose again. Busing of Latinos in areas of high minority enrollment to areas of lower minority enrollments was again being considered in 1992. In an article in the Santa Barbara News Press, a community member working with Hispanic parents cited that the Latino community mistrusted the SBSD due to the closing of the elementary schools in the 1970s.

Although many of the issues regarding desegregation may not command the political attention that they did in the 1960s and 1970s, many schools remain as racially and ethnically segregated today as they were in the past. Our own research, carried out for an upcoming *Santa Barbara Newspress* article, indicates that the skewed racial composition of area schools has not only persisted but may, in fact, be getting worse. In Figure 1, the blue shading indicates Census blocks with a majority of Latino school-aged children. The skewed spatial distribution of Latino and non-Latino students is readily apparent. The proportions in Table 1 further reinforce the partitioning among Latino and non-Latino living

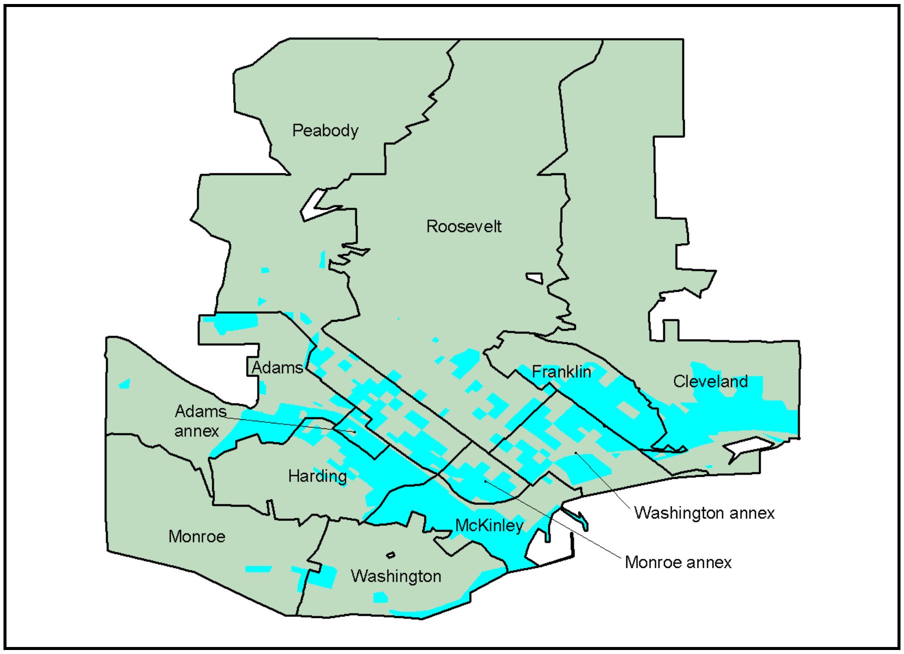

Figure 1: Majority school-aged (<18) Latino regions (blue) by district

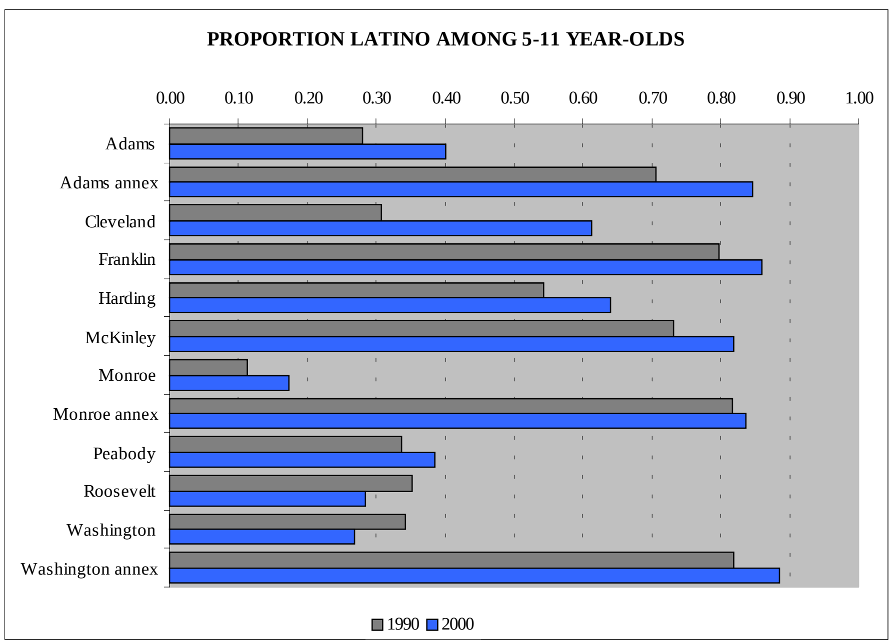

Table 1: Proportion school-aged Latino (5-11) by school district

within the catchment zones of particular schools. The actual enrollment in schools such as Adams, Cleveland, and Harding exceeds the proportion of schools-aged Latinos within their district suggestive of continuing ‘white flight’ away from those schools. These patterns partly reflect the growth of middle class suburbs, which tend to concentrate white populations outside of downtown school districts. Those that remain within city school districts may also opt to enrollment in private schools or request transfer majority white schools such as Roosevelt or Peabody. This is happening at a time when many school districts are experiencing decreased enrollments due to the end of the “little baby boom” in the 1980s and an anticipated decrease in new immigrants. All of these factors combine to make school relocations and closings a politically charged issue.

Enrollment Forecasting Methods

School enrollment projections are used on several different scales, from the federal government to local school districts, in order to allocate resources for education. There are four methods most often used to forecast enrollments: Ratio Method, Grade Retention (Cohort Survivor) Method, Regression/Curve Fitting Analysis, and Housing Unit Multiplier Method. These methods are summarized in a paper by Campbell[1], and are summarized here. Each of these methods may be applied to aggregate data or to individual grade levels.

<u>Ratio Method</u>: This method is perhaps one of the simplest ways to forecast school enrollment due to its relatively few inputs. Essentially, this method requires calculating the ratio of school enrollment to the total population enrollment. The data needed in order to perform this

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[1] H. S. Campbell. School enrollment in an extended demographic model. *Journal of Economic and Social Measurement* 23(1) (1997).

calculation may be obtained from school records of enrollment and population projections supplied by a local, federal, or state planning agency. Analysis of historical ratios may be averaged in order to perform a more accurate projection. To project at the level of individual grade distribution, it is possible to either determine grades level distributions as a proportion of the total population over time, or understand general trends in school enrollment and apportion grade level enrollments accordingly.

Grade Retention (Cohort Survivor) Method : This is the most widely used method for enrollment forecasts at the state and district level. There are two parts to this method; examining trends in birth rates and grade progression ratios. Due to its simplicity as a model and relatively small data requirements, this method is very commonly used in forecasting.

The first portion of this method is to establish the relationship between the number of kindergarten or 1st grade students entering a school and the birth rate of this group of children when they were born, approximately 6 years prior to their school enrollment. This ratio of birth rate to kindergarten enrollment is established for a number of years, and may therefore be used to predict future kindergarten enrollment.

Having established the number of students entering school, it is necessary to establish the average retention rate of students to each next grade level. This is calculated by relating the number of students in a particular grade level to the number of students in the next highest grade one year later. In examining retention rates for each grade level over time, it is possible to forecast the number of students per grade level. Using this in concert with birth rates gives enough information to predict future school enrollments.

In his paper, Campbell extends this model in order to incorporate more demographic information. Specifically, he explains the fact that the grade retention method overlooks important factors that cause students flows, such as migration, household mobility, changes in population structure and sex and class specific information related to high school drop out rates. By varying each of these factors within a model of school enrollment, it is possible to predict how different policies can change enrollment rates.

Regression/Curve Fitting Method: Use of regression and curve fitting is most often used in forecasts of university level enrollment forecasts. When applied to elementary and secondary levels of education, the curve fitting method is generally based on only enrollment trends over time. Because of the difficulty involved in creating a truly good regression model of school enrollment, this method is seldom used at the school district level.

Housing Unit Multiplier Method: The Housing Unit Multiplier Method essentially estimates future enrollment based on an analysis of the local housing stock, specifically by evaluating types of housing and the corresponding numbers of students they typically yield. Information required for undertaking this kind of study is much more intensive than the first two forecasting methods. Data about housing starts, building permits and zoning changes need to be obtained from the local planning commission. Next, there must be an estimate of the number of students each kind of housing unit yields. This information may then be used to predict the growth of student enrollment in the school district. It is particularly difficult to use this method for long-term projection; estimation of housing development into the future is difficult to predict. The best application for this procedure is during times of significant growth when there is a lack of historical data on which to build future trends.

School Enrollment Projections in Santa Barbara: As described in the memos by Lanny Ebenstein to the Santa Barbara School Districts (SBSD), the method used to predict enrollments in the local school district is essentially the grade retention method. As applied to the SBSD, this method uses the ratio of birth rates from the local hospital to kindergarten enrollment to predict the number of students that will be starting school in the SBSD. Historical trends of white flight and immigration (compared both locally and nationally) are used to explain both general trends in enrollment and specific grade progression ratios.

METHODOLOGY

As noted at the outset, the main methodological contribution of this research is to improve upon existing methods of enrollment forecasting, both in the extant literature and those used for the Santa Barbara School District in particular. Our method will be a hybrid of two of the existing methods and will also incorporate some traditional demographic processes. The three major foci of our methodology include: (1) a modified cohort model, (2) integration of the cohort model with analysis of housing units, and (3) incorporating demographic processes and household formation rates at the household level. The three elements are described below.

Modified cohort model: Traditional cohort models use multiple years of enrollment data to develop average grade succession (survivorship) rates. Simple averages over the multiple years fail to incorporate important trends that characterize shifts in the survivorship rates over time.

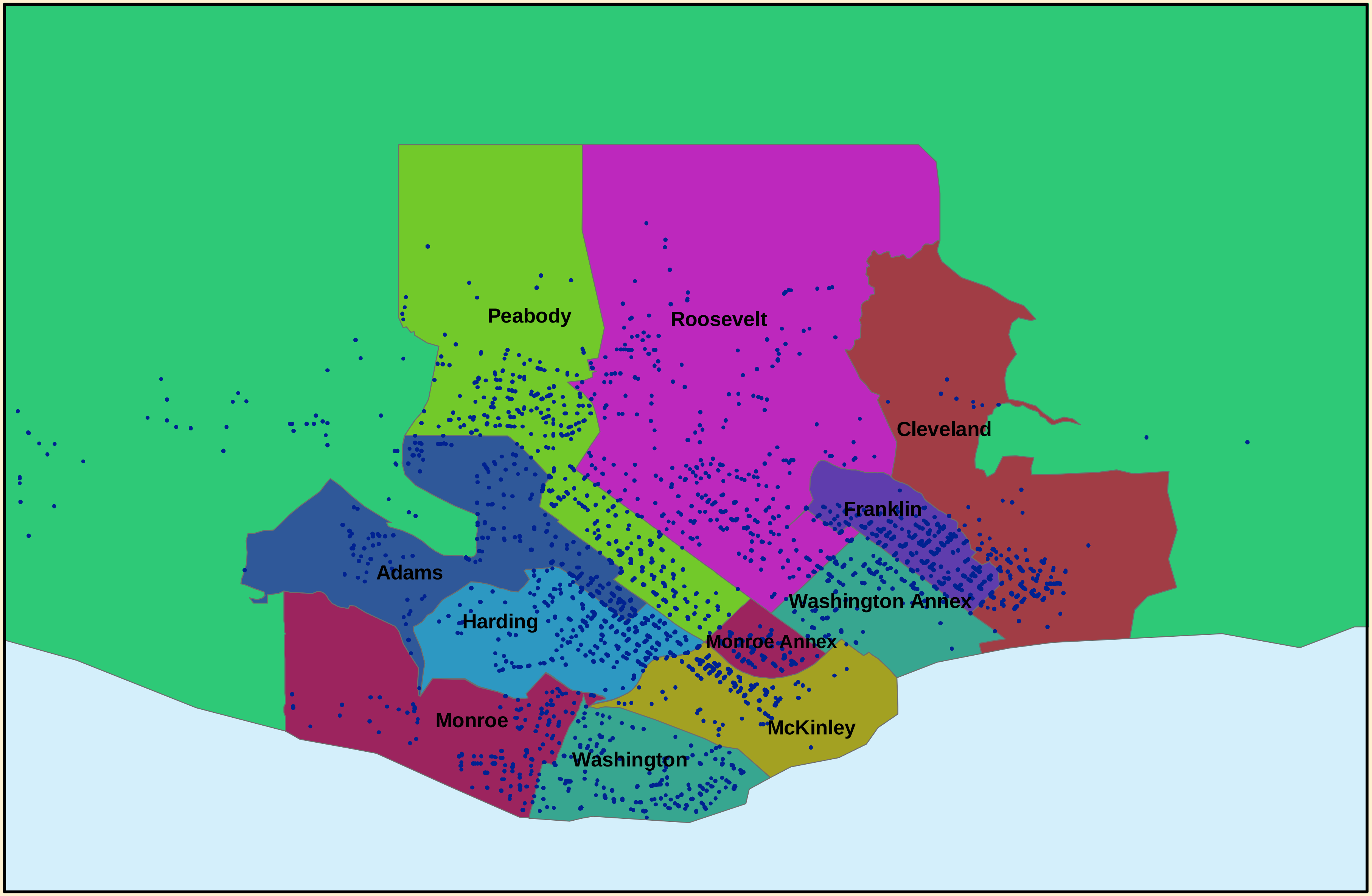
Church and Gerrard have already implemented a modified version of the cohort model that estimates an optimal sets of weights on successive years of survivorship rates to describe observed changes through time. This work has already been coded and can be applied in this study.

Housing units: The traditional housing unit method views new units as being characterized by a particular student generating profile. These profiles are be based on the type of unit (single family, multifamily, mobile home) and perhaps the characteristics of the unit given available data. The main driving force behind that method is simply disaggregate building permit series that indicate the number of new units added to a particular city. We propose to use two sources of data to better isolate the changing student generation rates of housing units. First, the Department of Geography already has access to geo-referenced county tax assessor files. Therefore, we know exactly where the housing units are and their characteristics. Second, we will use enrollment files (already under use in UCSB's Department of Education) and match individual students to housing units. The research task will be to develop a forecasting model that integrates the detailed housing information with the modified cohort model. Church has already made some progress on this problem in previous work.

Demographic processes: Our belief is that the student generation rates of particular housing unit types likely exhibits significant variation over both spatial and temporal domains. Therefore, it is not sufficient to know the characteristics of housing units but also to understand how those units are used by particular socioeconomic strata. In particular, Santa Barbara's high housing costs have led to non-traditional uses of single family units. As a coping strategy, recent immigrants and lower income residents may use single family units for multiple families. To get at those dynamics we will examine spatial variation in persons per household (and children per household) by race/ethnicity, income, and foreign-born. We will examine differences in fertility rates over the same socio-economic strata. The demographic information will then be integrated formally into the forecasting framework.

The final projections model should allow for significantly increased capacity to simulate alternative detailed futures at a small spatial resolution. The results will easily map to individual school districts rather than generating results at the district level. Though some of the modeling has not been formalized yet, we are confident the research team has the requisite skills to develop a working integrated forecasting model.

RESULTS



Santa Barbara Elementary School District

Table 1: Aggregate Student Records by School

	300	301	302	303	304	305	306	400	401	402	403	404	405	406	500	501	502	503	504	505	506	600	601	602	603	604	605	606	700	701	702	703	704	705	706
300	0.017182	0.699313	0	0	0	0	0	0	0.0189	0	0	0	0	0	0.006873	0.041237	0	0	0	0	0	0	0.042955	0	0	0	0	0	0.006873	0.027491	0	0	0	0	0
301	0	0.019597	0.698966	0.006532	0	0	0	0	0	0.019597	0	0	0	0	0	0.006532	0.029396	0.006532	0	0	0	0	0.006532	0.050626	0	0	0	0	0	0.006532	0.028307	0	0	0	0
302	0	0	0.016447	0.71875	0	0	0	0	0	0	0.013158	0	0	0	0	0	0	0.023026	0.006579	0	0	0	0	0.006579	0.054276	0	0	0	0	0	0	0.024671	0	0	0
303	0	0	0	0	0.776632	0	0	0	0	0	0	0.006873	0	0	0	0	0	0	0.025773	0	0	0	0	0	0.006873	0.046392	0	0	0	0	0	0	0.017182	0	0
304	0	0	0	0	0.007486	0.786026	0	0	0	0	0	0	0	0	0	0	0	0	0	0.032439	0	0	0	0	0	0.007486	0.033687	0	0	0	0	0	0	0.016843	0
305	0	0	0	0	0	0	0.504717	0	0	0	0	0	0	0.009434	0	0	0	0	0	0	0.012972	0	0	0	0	0	0	0.028302	0	0	0	0	0	0	0.014151
306	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
400	0	0.012384	0	0	0	0	0	0.012384	0.764706	0.012384	0	0	0	0	0.012384	0.024768	0	0	0	0	0	0	0.028896	0	0	0	0	0	0.012384	0.037152	0	0	0	0	0
401	0	0	0.016913	0	0	0	0	0	0.019027	0.745243	0.012685	0	0	0	0	0	0.038055	0.012685	0	0	0	0	0.012685	0.034884	0	0	0	0	0	0.012685	0.02537	0	0	0	0
402	0	0	0	0.02781	0	0	0	0	0	0	0.76825	0	0	0	0	0	0	0.034762	0	0	0	0	0	0	0.03708	0	0	0	0	0	0.013905	0.045191	0	0	0
403	0	0	0	0	0.018605	0	0	0	0	0	0.013953	0.756977	0.013953	0	0	0	0	0	0.045349	0	0	0	0	0	0.013953	0.023256	0	0	0	0	0	0	0.051163	0	0
404	0	0	0	0	0	0.017621	0	0	0	0	0	0	0.735683	0	0	0	0	0	0	0.057269	0	0	0	0	0	0	0.035242	0	0	0	0	0	0	0.052863	0
405	0	0	0	0	0	0	0	0	0	0	0	0	0	0.758065	0	0	0	0	0	0	0.064516	0	0	0	0	0	0	0.021505	0	0	0	0	0	0	0.086022
406	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
500	0	0.00883	0	0	0	0	0	0	0.015894	0	0	0	0	0	0.012362	0.856954	0	0	0	0	0	0	0.013245	0	0	0	0	0	0	0.007947	0	0	0	0	0
501	0	0.004884	0.014652	0	0	0	0	0	0.004884	0.014652	0	0	0	0	0	0.004884	0.826618	0	0	0	0	0	0	0.014652	0	0	0	0	0	0	0.008547	0	0	0	0
502	0	0.004732	0.004732	0.016562	0	0	0	0	0	0	0.011041	0	0	0	0	0	0.007098	0.820978	0.004732	0	0	0	0	0.004732	0.015379	0.004732	0	0	0	0	0	0.010647	0	0	0
503	0	0	0	0	0.016904	0	0	0	0	0	0	0.00461	0	0	0	0	0	0.00461	0.841337	0	0	0	0	0	0	0.017288	0	0	0	0	0	0	0.02305	0	0
504	0	0	0	0	0	0.004464	0	0	0	0	0	0.004464	0.008929	0	0	0	0	0	0.013393	0.833705	0.004464	0	0	0	0	0.008929	0.015625	0	0	0	0	0	0	0.014509	0
505	0	0	0	0	0	0	0.004715	0	0	0	0	0	0	0.00943	0	0	0	0	0	0.011002	0.855796	0	0	0	0	0	0.004715	0.016503	0	0	0	0	0	0	0.00943
506	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
600	0	0.020451	0	0	0	0	0	0.002098	0.024122	0	0	0	0	0	0	0.006293	0	0	0	0	0	0.024122	0.803356	0.002098	0	0	0	0	0.002098	0.016256	0	0	0	0	0
601	0	0.002005	0.022556	0.002005	0	0	0	0	0.002005	0.02005	0	0	0	0	0	0.002005	0.014035	0	0	0	0	0	0.01604	0.794486	0.002005	0	0	0	0	0.002005	0.017043	0	0	0	0
602	0	0	0.002047	0.015353	0	0	0	0	0	0	0.025589	0	0	0	0	0	0.002047	0.008188	0	0	0	0	0	0.011259	0.815251	0	0	0	0.002047	0	0	0.016377	0	0	0
603	0	0	0	0	0.017601	0.002071	0	0	0	0	0	0.010871	0	0	0	0	0	0.002071	0.009836	0	0	0	0	0	0.017947	0.760483	0.002071	0	0	0.002071	0	0	0.01346	0	0
604	0	0	0	0	0.002574	0.015444	0	0.002574	0	0	0	0.002574	0.005148	0	0	0	0	0	0	0.009009	0	0	0	0	0	0.010296	0.83462	0	0	0	0	0	0	0.019305	0
605	0	0	0	0	0	0	0.00515	0	0	0	0	0	0.002575	0.003433	0	0	0	0	0	0	0.008369	0	0	0	0	0	0.007725	0.538197	0	0	0	0	0	0.002575	0.008369
606	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.008608	0	0	0	0	0	0	0
700	0.004843	0.006053	0	0	0	0	0	0.004843	0.030266	0	0	0	0	0	0	0.009685	0	0	0	0	0	0.004843	0.038741	0.004843	0	0	0	0	0.025424	0.771186	0.004843	0	0	0	0
701	0	0.004792	0.014377	0	0	0	0	0	0	0.02516	0	0	0	0	0	0	0.010783	0	0	0	0	0	0.009585	0.027556	0	0	0	0	0	0.017572	0.793131	0.004792	0	0	0
702	0	0	0.004621	0.018483	0	0	0	0	0	0	0.023104	0	0	0	0	0	0	0.015017	0	0	0	0	0	0.004621	0.025414	0	0	0	0	0	0.016943	0.817867	0	0	0
703	0	0	0	0	0.011111	0	0	0	0	0	0.004444	0.018889	0	0	0	0	0	0	0.014444	0	0	0	0	0	0	0.028889	0	0	0	0	0	0.02	0.803333	0	0
704	0	0	0	0	0	0.007877	0	0	0	0	0	0.004501	0.013503	0	0	0	0	0	0	0.009002	0	0	0	0	0	0	0.024756	0	0	0	0	0	0.012003	0.823706	0.004501
705	0	0	0	0	0	0	0	0	0	0	0	0	0	0.013423	0	0	0	0	0	0	0.014541	0	0	0	0	0	0.004474	0.019016	0	0	0	0	0	0.013423	0.529083
706	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.007813	0

Table 2: Group School Enrollment Data

School Name	School ID	Grade	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007	Mean	Coef_var
			using average kind. enrollment and average imm					without average kind. enrollment and average imm.						
	310	k	1.416592	1.31381	1.313084	1.31307	1.313071	1.416592	0.020351	0.000633	0.000241	2.1E-05	0	0
	310	1	96.28001	88.1612	88.02694	88.02516	88.0251	96.28001	2.189394	0.043688	0.002817	0.001435	0.708208	9.090932
	310	2	83.64854	97.86533	91.88773	91.73363	91.73035	83.64854	81.65287	2.878753	0.078318	0.007872	0.767169	6.203093
	310	3	110.8472	78.63058	89.44329	84.98116	84.86731	110.8472	70.372	67.92018	2.446997	0.07302	0.755712	5.812488
	310	4	114.4055	109.2935	82.93836	91.72442	88.15181	114.4055	95.42085	61.93075	59.46577	2.364876	0.811836	2.890087
	310	5	82.69553	105.9046	101.3	79.51977	86.75745	82.69553	98.38603	82.05689	54.11452	51.65069	0.822955	3.624356
	310	6	90.14118	65.93915	82.71509	79.31825	63.56525	90.14118	60.29842	71.58401	59.67295	39.42321	0.7235	10.91769
Adams	20	k	1.420393	1.317498	1.316664	1.316658	1.316658	1.420393	0.019143	0.00031	6.04E-06	1.38E-07	0	0
	20	1	96.1938	88.09637	87.94421	87.94207	87.94201	96.1938	2.17196	0.041848	0.001882	0.000981	0.708208	9.090932
	20	2	83.5705	97.78232	91.92611	91.77692	91.7744	83.5705	81.60553	2.948945	0.087699	0.008608	0.767169	6.203093
	20	3	110.8673	78.55313	89.37289	84.99316	84.88322	110.8673	70.25676	67.81747	2.564354	0.090567	0.755712	5.812488
	20	4	114.3635	109.1349	82.51505	91.21153	87.76533	114.3635	95.28239	61.32958	58.9953	2.439449	0.811836	2.890087
	20	5	82.44996	105.571	100.8948	78.82345	85.91627	82.44996	98.07037	81.70463	53.49658	50.91764	0.822955	3.624356
	20	6	90.14118	65.81512	82.55581	79.09054	63.09876	90.14118	60.16878	71.4247	59.46438	38.98818	0.7235	10.91769
	410	k	1.542361	1.574861	1.543214	1.538123	1.530559	1.542361	0.263342	0.189745	0.16828	0.143716	0	0
	410	1	85.60531	87.19799	87.24381	87.21735	87.21288	85.60531	2.755768	0.271171	0.168055	0.143759	0.843846	6.358047
	410	2	69.43359	87.1317	88.50421	88.54569	88.52308	69.43359	80.12743	2.619643	0.243045	0.146753	0.841329	8.50596
	410	3	68.61023	73.5325	87.84482	89.1654	89.22121	68.61023	68.01026	75.217	3.295542	0.256567	0.824807	9.058918
	410	4	64.41334	65.81485	69.63223	81.45659	82.57698	64.41334	59.5462	58.58801	64.29012	3.103769	0.829227	5.4998
	410	5	48.62046	56.78126	57.84963	60.92664	70.42055	48.62046	52.86612	48.81355	47.96896	52.2142	0.803356	4.275464
	410	6	58.91177	50.24606	57.69787	58.52727	61.11699	58.91177	47.28917	50.93828	46.86892	45.70058	0.911131	10.44091
Open	25	k	0.21875	0.226318	0.226377	0.226378	0.226378	0.21875	0.001709	1.34E-05	1.04E-07	8.15E-10	0	0
Alternative	25	1	27.91136	28.72061	28.72675	28.72652	28.72643	27.91136	0.257996	0.006943	0.00357	0.002669	0.871696	9.808166
	25	2	28.0356	28.17281	28.87857	28.88418	28.884	28.0356	25.00488	0.257257	0.008015	0.00393	0.858929	4.879076
	25	3	28.9189	28.02376	28.10663	28.78279	28.80129	28.9189	26.10241	23.27059	0.70786	0.046145	0.856693	7.340354
	25	4	29.3702	29.55325	28.54852	28.60531	29.20389	29.3702	25.8404	23.13272	20.61564	0.661752	0.842125	7.603555
	25	5	24.83994	26.57923	26.72112	25.83047	25.89937	24.83994	24.30437	21.39532	19.09191	17.0364	0.812745	4.770499
	25	6	28.16054	27.98079	29.5883	29.65832	28.53343	28.16054	25.09061	24.44504	21.56877	19.01269	0.90191	12.36907
SB	26	k	1.291667	1.293412	1.274741	1.267838	1.261104	1.291667	0.242912	0.183063	0.159519	0.137264	0	0
Community	26	1	50.95265	53.26415	53.56662	53.59416	53.5938	50.95265	7.915071	1.162175	0.260866	0.126676	0.583206	66.70992
Academy	26	2	33.38747	42.21041	43.66706	43.85829	43.8756	33.38747	38.94783	5.220287	0.742205	0.168996	0.626131	68.76815
	26	3	31.46432	31.03416	35.91036	36.85036	36.97388	31.46432	28.16221	29.972	3.570842	0.467157	0.591105	69.83751
	26	4	32.55873	28.51838	28.09981	31.07293	31.64037	32.55873	20.55333	18.15377	19.1541	2.498673	0.608111	67.72333
	26	5	22.26094	39.19379	36.54223	36.37812	38.9446	22.26094	37.60451	25.24151	22.39292	22.77683	0.379752	115.7202
	26	6	88.75	182.0582	262.7645	324.3565	368.4388	88.75	178.1604	245.1469	273.6595	278.2562	0.954545	9.52381
	510	k	2.260503	2.235856	2.235517	2.23541	2.235392	2.260503	0.030813	0.001209	0.00063	0.000553	0	0
	510	1	162.276	161.3149	161.2775	161.2763	161.2761	162.276	3.360814	0.070446	0.006976	0.00366	0.8667	1.307165
	510	2	154.5019	163.0199	162.1682	162.1338	162.1319	154.5019	146.6158	3.721341	0.089983	0.012697	0.852599	3.450501
	510	3	164.5262	154.8394	162.5782	161.8633	161.834	164.5262	139.3961	132.1069	3.778132	0.101568	0.856093	3.548173
	510	4	181.9052	168.3049	159.2036	166.6554	166.0765	181.9052	153.6717	130.2672	123.3234	4.390656	0.878575	2.325632
	510	5	191.6103	186.8866	174.6514	166.0966	173.1551	191.6103	168.2549	142.3438	120.6478	114.3361	0.878672	2.360649
	510	6	174.2196	188.2734	184.4362	173.2706	165.1394	174.2196	176.2521	155.381	131.5262	111.3242	0.893272	4.564445
Peabody	29	k	0.704616	0.716012	0.715879	0.715877	0.715877	0.704616	0.006303	6.84E-05	9.33E-07	1.61E-08	0	0
	29	1	87.59389	92.76096	92.79565	92.79597	92.79595	87.59389	1.682014	0.035508	0.001852	0.0009	0.87271	3.220281
	29	2	93.20057	89.28471	93.70673	93.74725	93.74764	93.20057	81.74605	1.847715	0.043091	0.003987	0.876692	4.44508
	29	3	86.93493	90.61712	87.5618	91.25455	91.28934	86.93493	83.19283	73.17944	1.755103	0.048271	0.847682	4.627993
	29	4	89.40144	86.2302	88.93634	86.39918	89.5884	89.40144	79.10745	75.08012	65.94638	1.640124	0.873706	3.034175
	29	5	104.8449	92.62989	89.52588	91.41202	89.33403	104.8449	83.21325	73.39769	69.05128	60.78285	0.890198	2.052023
	29	6	110.1021	104.511	93.81122	90.77421	92.04798	110.1021	98.32529	78.81827	69.36509	64.76558	0.903861	4.783841
Roosevelt	30	k	1.539474	1.434736	1.433156	1.433132	1.433131	1.539474	0.026162	0.000427	6.83E-06	1.08E-07	0	0
	30	1	74.53269	68.44055	68.33458	68.33312	68.33317	74.53269	1.634427	0.031973	0.002702	0.000194	0.859102	5.500114
	30	2	61.29058	72.92037	68.09592	67.98911	67.98813	61.29058	64.21911	2.050335	0.079272	0.011762	0.818266	6.848605
	30	3	77.2823	63.47604	73.45782	69.46103	69.35334	77.2823	55.49576	57.60192	2.20604	0.092469	0.854227	3.247752
	30	4	91.55509	80.80988	68.14732	76.86734	73.54319	91.55509	73.37474	53.28342	54.46229	2.88312	0.876802	1.783069
	30	5	86.02681	92.38393	83.19655	72.00147	79.25635	86.02681	83.23162	67.1145	49.23629	49.65912	0.850667	5.569888
	30	6	64.33087	82.8763	88.54267	80.46595	70.46402	64.33087	77.04189	74.58317	60.2957	44.34636	0.872934	5.410408
	610	k	10.40519	10.5186	10.52181	10.52188	10.52189	10.40519	0.276676	0.007603	0.00042	2.85E-05	0	0
	610	1	336.4925	339.2475	339.3662	339.3408	339.3354	336.4925	14.43899	0.686641	0.197389	0.158379	0.803256	2.453924
	610	2	341.1709	323.5891	325.6036	325.7065	325.6855	341.1709	290.0645	15.92277	0.781485	0.179452	0.825039	2.2302
	610	3	332.0445	324.7992	310.6179	312.1465	312.2625	332.0445	296.9676	253.4331	17.43747	0.918068	0.835558	3.567691
	610	4	371.9501	320.4383	312.8612	300.9001	302.2032	371.9501	296.7168	264.3734	226.0053	16.86736	0.862273	2.12514
	610	5	352.9906	353.9094	309.2862	301.6814	291.6196	352.9906	330.279	264.3037	234.7158	201.1027	0.863785	2.311989
	610		357.4302	329.5984	330.7592	292.4349	285.1745	357.4302	307.7825	288.2706	231.138	204.7037	0.856591	6.018529
Cleveland	21	k	0.67965	0.725546	0.725973	0.725977	0.725977	0.67965	0.006328	5.89E-05	5.48E-07	5.11E-09	0	0
	21	1	61.76621	65.18789	65.30253	65.30559	65.30568	61.76621	2.08308	0.057696	0.002079	9.99E-05	0.76372	2.67799
	21	2	67.77162	58.51575	61.13198	61.22505	61.22759	67.77162	51.9719	2.193478	0.073993	0.005726	0.780149	6.88304
	21	3	61.18954	63.20895	55.90974	57.96018	58.04768	61.18954	58.95331	45.87872	2.271645	0.084676	0.814167	9.19601
	21	4	69.85287	59.13958	60.71451	54.49285	56.23019	69.85287	55.02911	52.73318	41.18977	2.207152	0.848606	3.114527
	21	5	69.1068	66.72999	57.45731	58.55614	53.30499	69.1068	62.05798	49.0279	46.65873	36.68853	0.848286	8.929217
	21	6	85.25437	66.02012	64.02223	55.62429	56.46159	85.25437	62.98022	56.72542	44.86749	42.51182	0.878479	6.642175
Franklin	22	k	4.479685	4.398785	4.397228	4.397211	4.397211	4.479685	0.148215	0.004831	0.000157	5.15E-06	0	0
	22	1	112.0608	109.4928	109.4005	109.3765	109.3678	112.0608	4.87186	0.422009	0.228185	0.190334	0.782825	6.364666
	22	2	110.8345	105.5971	103.5544	103.4718	103.4526	110.8345	95.28586	4.862106	0.392349	0.188165	0.792894	4.826208
	22	3	110.6098	106.9231	102.5129	100.7919	100.6919	110.6098	97.11799	83.64487	5.88077	0.455432	0.831416	6.082854
	22	4	119.9874	109.3453	105.569	101.8298	100.4139	119.9874	100.4663	87.86891	75.85386	5.765002	0.857075	2.985207
	22	5	125.0017	117.4523	107.9442	104.2837	101.028	125.0017	107.8898	90.33703	78.80694	68.08112	0.852627	4.069485
	22	6	116.2851	123.1247	116.5947	107.7872	104.2002	116.2851	115.4576	100.1133	83.81151	72.95261	0.898291	1.66953
Harding	24	k	2.053763	2.034896	2.03452	2.034512	2.034512	2.053763	0.040951	0.000817	1.63E-05	3.25E-07	0	0
	24	1	88.01781	87.18921	87.13357	87.13168	87.1316	88.01781	3.898989	0.129475	0.007003	0.001728	0.745479	1.868971
	24	2	90.28323	87.3024	86.55427	86.48617	86.48284	90.28323	78.38363	5.733742	0.282366	0.018344	0.810478	4.027101
	24	3	80.3115	84.75208	82.36298	81.74958	81.68697	80.3115	77.26926	67.21015	5.597431	0.305434	0.808756	4.784815
	24	4	88.89	75.514	78.43762	76.56545	76.0394	88.89	69.79686	66.28463	57.78349	5.430412	0.809077	6.532967
	24	5	86.46132	82.62442	71.38267	73.39572	71.86077	86.46132	77.13526	60.79701	57.25619	49.95251	0.818203	2.302654
	24	6	70.36467	75.91187	73.28748	64.32293	65.57055	70.36467	70.06224	62.94002	49.69999	46.42868	0.781778	13.08141
McKinley	27	k	3.245374	3.379743	3.384659	3.384836	3.384842	3.245374	0.119708	0.004357	0.000157	5.66E-06	0	0
	27	1	80.30184	83.13717	83.2724	83.27543	83.27479	80.30184	3.959865	0.183653	0.03045	0.020568	0.778817	7.59182
	27	2	71.8844	76.54034	78.80297	78.92197	78.9247	71.8844	68.79852	3.705159	0.180272	0.030421	0.79979	5.713252
	27	3	80.49738	69.88608	73.74416	75.61022	75.72404	80.49738	63.50485	60.49245	3.924912	0.206416	0.832102	6.317453
	27	4	92.79569	76.58409	67.374	70.49265	72.11528	92.79569	71.60256	56.72824	53.73418	3.757076	0.840965	3.808529
	27	5	71.76931	86.00696	72.08271	64.0406	66.62032	71.76931	82.08405	63.64447	50.55305	47.68616	0.845429	1.712421
	27	6	87.15907	64.75495	76.59887	65.08799	58.36164	87.15907	59.56543	68.14142	52.85679	41.93839	0.825324	10.87617
	710	k	4.865851	5.071042	5.065785	5.066716	5.06678	4.865851	0.323459	0.174962	0.013851	0.00132	0	0
	710	1	146.6231	153.6773	153.9441	153.9437	153.9443	146.6231	6.559528	0.370624	0.145916	0.015311	0.785193	5.148897
	710	2	153.5184	147.3574	153.1558	153.4502	153.4529	153.5184	131.8392	7.330311	0.410877	0.131415	0.843914	3.836997
	710	3	174.945	153.3864	148.9339	153.8193	154.1232	174.945	142.2756	123.1955	7.923784	0.456606	0.854082	1.98034
	710	4	166.5416	170.8178	152.2761	148.6999	152.7789	166.5416	155.1091	126.551	109.9562	7.887091	0.845098	4.74328
	710	5	167.2402	165.2439	168.2093	152.003	149.1247	167.2402	152.8907	141.5776	116.066	101.2432	0.858878	2.218093
	710	6	157.8196	152.6464	151.4547	153.6909	140.0227	157.8196	141.4505	129.7679	119.8782	98.27822	0.824047	5.441495
Monroe	28	k	2.223942	2.294908	2.295898	2.295912	2.295912	2.223942	0.051734	0.001267	3.31E-05	9.2E-07	0	0
	28	1	88.27856	92.45529	92.60146	92.60567	92.60586	88.27856	3.873389	0.133564	0.006924	0.000459	0.809921	3.285634
	28	2	88.00957	88.41549	92.01791	92.21427	92.22174	88.00957	81.20175	5.049778	0.219058	0.011351	0.85778	4.594833
	28	3	104.025	82.01749	82.16368	85.11022	85.31676	104.025	77.44302	71.12577	5.345126	0.263196	0.829659	6.078546
	28	4	86.44381	96.0279	77.77795	77.68601	80.11435	86.44381	89.85801	67.50811	61.7446	5.415998	0.825045	5.606491
	28	5	82.25875	81.8388	89.35612	74.03244	73.91633	82.25875	76.67582	78.59917	59.53718	54.33468	0.828478	3.903635
	28	6	72.69048	67.39352	67.18088	72.91648	61.09194	72.69048	63.50886	59.29431	60.67433	45.95142	0.765324	12.44134
Washington	31	k	2.703105	2.806762	2.820535	2.826067	2.826445	2.703105	0.25163	0.168389	0.013712	0.00157	0	0
	31	1	57.98145	61.01536	61.12364	61.1358	61.13999	57.98145	2.722113	0.244742	0.1306	0.013119	0.723834	9.829101
	31	2	65.37104	58.36862	60.84156	60.93193	60.94206	65.37104	50.19969	2.3384	0.208822	0.108545	0.819371	6.750066
	31	3	70.06409	69.78078	64.38614	66.59782	66.69826	70.06409	63.39154	50.12477	2.738791	0.230964	0.830607	1.42196
	31	4	80.01405	73.6412	72.99414	68.45121	70.36756	80.01405	64.037	57.61333	45.97138	2.616917	0.854615	6.416795
	31	5	85.02434	83.06648	77.18345	76.17554	72.13408	85.02434	75.82214	61.08986	54.6351	43.94914	0.870739	3.435972
	31	6	85.07612	85.34184	84.14705	79.08811	77.60759	85.07612	77.94794	70.16398	56.93404	50.4632	0.857446	2.809531

Table 3: Student Movement Records

	leave	300	301	302	303	304	305	306	400	401	402	403	404	405	406	500	501	502	503	504	505	506	600	601	602	603	604	605	606	700	701	702	703	704	705	706
new	12717.5	113.75	20.75	10.25	17	8.75	8.75	1	85	7.25	6.75	7.5	4.75	3.5	3.5	177.25	19.5	18.5	15.75	21.25	14.25	13	405.25	39.5	33.5	28.5	24	57.25	38.75	182.5	18	13	19	13.75	13.75	6
300	20.25	2.5	101.75	0	0	0	0	0	0	2.75	0	0	0	0	0	1	6	0	0	0	0	0	0	6.25	0	0	0	0	0	1	4	0	0	0	0	0
301	18.5	0	3	107	1	0	0	0	0	0	3	0	0	0	0	0	1	4.5	1	0	0	0	0	1	7.75	0	0	0	0	0	1	4.333333	0	0	0	0
302	20.75	0	0	2.5	109.25	0	0	0	0	0	0	2	0	0	0	0	0	0	3.5	1	0	0	0	0	1	8.25	0	0	0	0	0	0	3.75	0	0	0
303	17.5	0	0	0	0	113	0	0	0	0	0	0	1	0	0	0	0	0	0	3.75	0	0	0	0	0	1	6.75	0	0	0	0	0	0	2.5	0	0
304	15.5	0	0	0	0	1	105	0	0	0	0	0	0	0	0	0	0	0	0	0	4.333333	0	0	0	0	0	1	4.5	0	0	0	0	0	0	2.25	0
305	91.25	0	0	0	0	0	0	107	0	0	0	0	0	0	2	0	0	0	0	0	0	2.75	0	0	0	0	0	0	6	0	0	0	0	0	0	3
306	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
400	6.666667	0	1	0	0	0	0	0	1	61.75	1	0	0	0	0	1	2	0	0	0	0	0	0	2.333333	0	0	0	0	0	1	3	0	0	0	0	0
401	5.5	0	0	1.333333	0	0	0	0	0	1.5	58.75	1	0	0	0	0	0	3	1	0	0	0	0	1	2.75	0	0	0	0	0	1	2	0	0	0	0
402	5.25	0	0	0	2	0	0	0	0	0	0	55.25	0	0	0	0	0	0	2.5	0	0	0	0	0	0	2.666667	0	0	0	0	0	1	3.25	0	0	0
403	4.5	0	0	0	0	1.333333	0	0	0	0	0	1	54.25	1	0	0	0	0	0	3.25	0	0	0	0	0	1	1.666667	0	0	0	0	0	0	3.666667	0	0
404	5.75	0	0	0	0	0	1	0	0	0	0	0	0	41.75	0	0	0	0	0	0	3.25	0	0	0	0	0	0	2	0	0	0	0	0	0	3	0
405	3.25	0	0	0	0	0	0	0	0	0	0	0	0	0	35.25	0	0	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	4
406	41.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
500	16	0	1.666667	0	0	0	0	0	0	3	0	0	0	0	0	2.333333	161.75	0	0	0	0	0	0	2.5	0	0	0	0	0	0	1.5	0	0	0	0	0
501	21.75	0	1	3	0	0	0	0	0	1	3	0	0	0	0	0	1	169.25	0	0	0	0	0	0	3	0	0	0	0	0	0	1.75	0	0	0	0
502	20	0	1	1	3.5	0	0	0	0	0	0	2.333333	0	0	0	0	0	1.5	173.5	1	0	0	0	0	1	3.25	1	0	0	0	0	0	2.25	0	0	0
503	20	0	0	0	0	3.666667	0	0	0	0	0	0	1	0	0	0	0	0	1	182.5	0	0	0	0	0	0	3.75	0	0	0	0	0	0	5	0	0
504	20.5	0	0	0	0	0	1	0	0	0	0	0	1	2	0	0	0	0	0	3	186.75	1	0	0	0	0	2	3.5	0	0	0	0	0	0	3.25	0
505	18.75	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	2.333333	181.5	0	0	0	0	0	1	3.5	0	0	0	0	0	0	2
506	229.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
600	47.25	0	9.75	0	0	0	0	0	1	11.5	0	0	0	0	0	0	3	0	0	0	0	0	11.5	383	1	0	0	0	0	1	7.75	0	0	0	0	0
601	51.75	0	1	11.25	1	0	0	0	0	1	10	0	0	0	0	0	1	7	0	0	0	0	0	8	396.25	1	0	0	0	0	1	8.5	0	0	0	0
602	49.75	0	0	1	7.5	0	0	0	0	0	0	12.5	0	0	0	0	0	1	4	0	0	0	0	0	5.5	398.25	0	0	0	1	0	0	8	0	0	0
603	78	0	0	0	0	8.5	1	0	0	0	0	0	5.25	0	0	0	0	0	1	4.75	0	0	0	0	0	8.666667	367.25	1	0	0	1	0	0	6.5	0	0
604	38.25	0	0	0	0	1	6	0	1	0	0	0	1	2	0	0	0	0	0	0	3.5	0	0	0	0	0	4	324.25	0	0	0	0	0	0	7.5	0
605	164.5	0	0	0	0	0	0	2	0	0	0	0	0	1	1.333333	0	0	0	0	0	0	3.25	0	0	0	0	0	3	209	0	0	0	0	0	1	3.25
606	172.75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.5	0	0	0	0	0	0	0
700	19.5	1	1.25	0	0	0	0	0	1	6.25	0	0	0	0	0	0	2	0	0	0	0	0	1	8	1	0	0	0	0	5.25	159.25	1	0	0	0	0
701	19.25	0	1	3	0	0	0	0	0	0	5.25	0	0	0	0	0	0	2.25	0	0	0	0	0	2	5.75	0	0	0	0	0	3.666667	165.5	1	0	0	0
702	16	0	0	1	4	0	0	0	0	0	0	5	0	0	0	0	0	0	3.25	0	0	0	0	0	1	5.5	0	0	0	0	0	3.666667	177	0	0	0
703	22.25	0	0	0	0	2.5	0	0	0	0	0	1	4.25	0	0	0	0	0	0	3.25	0	0	0	0	0	0	6.5	0	0	0	0	0	4.5	180.75	0	0
704	22.25	0	0	0	0	0	1.75	0	0	0	0	0	1	3	0	0	0	0	0	0	2	0	0	0	0	0	0	5.5	0	0	0	0	0	2.666667	183	1
705	90.75	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3.25	0	0	0	0	0	1	4.25	0	0	0	0	0	3	118.25
706	127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0

Table 4: Cohort Summaries and Survival Rates

Name	School ID	Grade	2003	2004	2005	2006	2003	2004	2005	2006	Mean	Coef_var
			w/o average kind. Enrollment				with average kind. Enrollment					
	310	1	0	0	0	0	102.8751	102.8751	102.8751	102.8751	0.945978	6.807003
	310	2	78.92738	0	0	0	78.92738	95.37059	95.37059	95.37059	0.927053	10.16195
	310	3	95.90223	75.60113	0	0	95.90223	75.60113	91.35137	91.35137	0.957857	8.549698
	310	4	73.04893	89.19246	70.31172	0	73.04893	89.19246	70.31172	84.96	0.930035	3.928914
	310	5	98.99935	67.61592	82.55876	65.08229	98.99935	67.61592	82.55876	65.08229	0.925625	0.769981
	310	6	83.65815	72.74454	49.68406	60.66403	83.65815	72.74454	49.68406	60.66403	0.734798	12.53496
Adams	20	1	0	0	0	0	101.8725	101.8725	101.8725	101.8725	0.936759	3.334395
	20	2	77.66784	0	0	0	77.66784	93.84864	93.84864	93.84864	0.921236	8.279837
	20	3	94.38801	73.68231	0	0	94.38801	73.68231	89.03279	89.03279	0.948685	4.107994
	20	4	70.69075	85.7716	66.95607	0	70.69075	85.7716	66.95607	80.90525	0.908713	6.463969
	20	5	92.40145	62.50529	75.8399	59.20306	92.40145	62.50529	75.8399	59.20306	0.884208	8.587492
	20	6	102.4061	87.00523	58.85501	71.41087	102.4061	87.00523	58.85501	71.41087	0.9416	5.5401
	410	1	0	0	0	0	125.0057	125.0057	125.0057	125.0057	1.623451	69.27558
	410	2	189.197	0	0	0	189.197	153.3492	153.3492	153.3492	1.226737	45.70083
	410	3	143.58	251.6367	0	0	143.58	251.6367	203.9582	203.9582	1.330025	44.10318
	410	4	97.70923	138.7894	243.2407	0	97.70923	138.7894	243.2407	197.153	0.966635	11.44969
	410	5	67.73894	86.67315	123.1134	215.7671	67.73894	86.67315	123.1134	215.7671	0.887052	3.949182
	410	6	67.30047	76.7066	98.14742	139.4118	67.30047	76.7066	98.14742	139.4118	1.132386	18.11609
Open	25	1	0	0	0	0	30.68509	30.68509	30.68509	30.68509	1.067307	24.01348
Alternative	25	2	29.26135	0	0	0	29.26135	30.04513	30.04513	30.04513	0.979144	7.220583
	25	3	25.20762	27.90074	0	0	25.20762	27.90074	28.64808	28.64808	0.953501	14.91552
	25	4	32.6798	26.99852	29.88297	0	32.6798	26.99852	29.88297	30.68341	1.071046	13.50398
	25	5	44.09139	35.40312	29.24839	32.37322	44.09139	35.40312	29.24839	32.37322	1.083333	17.13158
	25	6	34.18846	46.38205	37.2424	30.76793	34.18846	46.38205	37.2424	30.76793	1.051953	13.76639
SB	26	1	0	0	0	0	32.79347	32.79347	32.79347	32.79347	0.679657	34.32471
Community	26	2	28.28565	0	0	0	28.28565	20.36989	20.36989	20.36989	0.621157	34.55938
Academy	26	3	26.31474	19.64419	0	0	26.31474	19.64419	14.14675	14.14675	0.694493	36.9834
	26	4	53.38713	45.9743	34.32023	0	53.38713	45.9743	34.32023	24.71568	1.747093	113.1093
	26	5	87.01142	64.85045	55.84593	41.68948	87.01142	64.85045	55.84593	41.68948	1.214721	87.04914
	26	6	32.23098	62.39815	46.50594	40.04856	32.23098	62.39815	46.50594	40.04856	0.717126	34.78656
	510	1	0	0	0	0	177.6206	177.6206	177.6206	177.6206	1.038717	3.018462
	510	2	191.2122	0	0	0	191.2122	176.7421	176.7421	176.7421	0.995054	2.862365
	510	3	170.0131	187.7595	0	0	170.0131	187.7595	173.5507	173.5507	0.981943	2.551583
	510	4	178.9403	175.0373	193.3083	0	178.9403	175.0373	193.3083	178.6795	1.029552	6.085839
	510	5	180.1397	175.8932	172.0568	190.0166	180.1397	175.8932	172.0568	190.0166	0.982972	3.646411
	510	6	210.2962	178.421	174.2151	170.4152	210.2962	178.421	174.2151	170.4152	0.990459	2.83251
Peabody	29	1	0	0	0	0	102.5623	102.5623	102.5623	102.5623	1.049231	8.825759
	29	2	114.9157	0	0	0	114.9157	103.0551	103.0551	103.0551	1.004805	3.971219
	29	3	87.81545	111.5902	0	0	87.81545	111.5902	100.0729	100.0729	0.971062	1.464776
	29	4	105.0596	85.59271	108.7657	0	105.0596	85.59271	108.7657	97.53987	0.974689	4.891474
	29	5	90.85509	103.085	83.98401	106.7214	90.85509	103.085	83.98401	106.7214	0.981205	8.251748
	29	6	110.2287	93.63922	106.2439	86.55759	110.2287	93.63922	106.2439	86.55759	1.030644	6.229511
Roosevelt	30	1	0	0	0	0	73.72706	73.72706	73.72706	73.72706	1.006513	6.960805
	30	2	78.75988	0	0	0	78.75988	75.91001	75.91001	75.91001	1.029609	9.861736
	30	3	85.02169	77.42537	0	0	85.02169	77.42537	74.62379	74.62379	0.983056	4.934159
	30	4	63.65157	83.40971	75.95742	0	63.65157	83.40971	75.95742	73.20896	0.98104	5.483488
	30	5	78.03223	60.99836	79.93291	72.79126	78.03223	60.99836	79.93291	72.79126	0.958317	3.145815
	30	6	103.982	79.12966	61.85623	81.05707	103.982	79.12966	61.85623	81.05707	1.014064	3.162111
	610	1	0	0	0	0	364.8014	364.8014	364.8014	364.8014	0.946307	4.197799
	610	2	333.537	0	0	0	333.537	340.1548	340.1548	340.1548	0.932438	2.9435
	610	3	306.9806	311.0715	0	0	306.9806	311.0715	317.2436	317.2436	0.932645	3.033668
	610	4	325.5985	292.0189	295.9104	0	325.5985	292.0189	295.9104	301.7817	0.951262	2.322363
	610	5	316.2895	308.4324	276.6232	280.3096	316.2895	308.4324	276.6232	280.3096	0.947278	4.439796
	610	6	343.884	297.4622	290.0729	260.1571	343.884	297.4622	290.0729	260.1571	0.940475	11.21459
Cleveland	21	1	0	0	0	0	73.24622	73.24622	73.24622	73.24622	0.948171	3.432441
	21	2	59.47373	0	0	0	59.47373	66.58472	66.58472	66.58472	0.909053	7.740629
	21	3	54.62732	54.98349	0	0	54.62732	54.98349	61.5576	61.5576	0.9245	11.37983
	21	4	61.74665	49.97966	50.30553	0	61.74665	49.97966	50.30553	56.32033	0.914921	10.07416
	21	5	61.42561	60.08006	48.63067	48.94775	61.42561	60.08006	48.63067	48.94775	0.973009	7.603709
	21	6	64.23967	57.11859	55.86739	45.2208	64.23967	57.11859	55.86739	45.2208	0.929882	5.981008
Franklin	22	1	0	0	0	0	115.8506	115.8506	115.8506	115.8506	0.949595	6.578399
	22	2	110.5551	0	0	0	110.5551	112.3977	112.3977	112.3977	0.970195	3.519502
	22	3	97.80452	108.2035	0	0	97.80452	108.2035	110.0069	110.0069	0.978729	1.483239
	22	4	112.1621	95.79801	105.9837	0	112.1621	95.79801	105.9837	107.7501	0.979484	3.097637
	22	5	112.2585	113.76	97.16278	107.4935	112.2585	113.76	97.16278	107.4935	1.014246	6.674404
	22	6	121.2322	106.4936	107.9179	92.17307	121.2322	106.4936	107.9179	92.17307	0.948646	6.496507
Harding	24	1	0	0	0	0	93.55176	93.55176	93.55176	93.55176	0.935518	7.350967
	24	2	85.9551	0	0	0	85.9551	85.9551	85.9551	85.9551	0.918797	2.469225
	24	3	88.73772	83.01569	0	0	88.73772	83.01569	83.01569	83.01569	0.965803	9.942284
	24	4	92.02268	88.07311	82.39394	0	92.02268	88.07311	82.39394	82.39394	0.99251	10.05267
	24	5	81.92378	83.4696	79.88713	74.73582	81.92378	83.4696	79.88713	74.73582	0.907055	16.30478
	24	6	86.82688	82.5481	84.1057	80.49593	86.82688	82.5481	84.1057	80.49593	1.007621	23.36955
McKinley	27	1	0	0	0	0	81.1896	81.1896	81.1896	81.1896	0.941329	3.941871
	27	2	75.01673	0	0	0	75.01673	72.6988	72.6988	72.6988	0.89542	7.064033
	27	3	73.28092	72.22762	0	0	73.28092	72.22762	69.99586	69.99586	0.96282	2.83599
	27	4	80.26564	75.42068	74.33662	0	80.26564	75.42068	74.33662	72.0397	1.029199	6.048241
	27	5	71.54861	71.53799	67.21984	66.25366	71.54861	71.53799	67.21984	66.25366	0.891265	5.798682
	27	6	74.73567	63.8255	63.81603	59.96399	74.73567	63.8255	63.81603	59.96399	0.892058	13.97762
	710	1	0	0	0	0	166.4411	166.4411	166.4411	166.4411	0.959315	3.679934
	710	2	150.8851	0	0	0	150.8851	160.6047	160.6047	160.6047	0.964934	4.590204
	710	3	163.2844	152.8892	0	0	163.2844	152.8892	162.7379	162.7379	1.013283	4.153012
	710	4	153.1996	156.248	146.3008	0	153.1996	156.248	146.3008	155.7251	0.956907	6.99047
	710	5	171.0126	149.6114	152.5885	142.8743	171.0126	149.6114	152.5885	142.8743	0.976579	2.721691
	710	6	146.0311	154.9824	135.5873	138.2853	146.0311	154.9824	135.5873	138.2853	0.906263	9.811448
Monroe	28	1	0	0	0	0	95.54471	95.54471	95.54471	95.54471	0.955447	7.110781
	28	2	69.99552	0	0	0	69.99552	89.73784	89.73784	89.73784	0.939224	6.277007
	28	3	90.2925	65.97095	0	0	90.2925	65.97095	84.57815	84.57815	0.942503	3.539905
	28	4	80.52059	88.66594	64.78253	0	80.52059	88.66594	64.78253	83.05452	0.981986	4.012448
	28	5	103.2009	74.88705	82.46253	60.25009	103.2009	74.88705	82.46253	60.25009	0.930036	20.86837
	28	6	74.47171	96.08962	69.72681	76.78028	74.47171	96.08962	69.72681	76.78028	0.931093	15.92004
Washington	31	1	0	0	0	0	74.37736	74.37736	74.37736	74.37736	1.011937	18.14015
	31	2	88.09765	0	0	0	88.09765	76.17856	76.17856	76.17856	1.024217	14.1508
	31	3	64.81468	85.7694	0	0	64.81468	85.7694	74.16531	74.16531	0.973572	3.362369
	31	4	70.06253	65.69507	86.93443	0	70.06253	65.69507	86.93443	75.17271	1.013583	11.07847
	31	5	67.86486	67.0152	62.8377	83.15326	67.86486	67.0152	62.8377	83.15326	0.956506	8.741193
	31	6	74.13816	66.58435	65.75072	61.65205	74.13816	66.58435	65.75072	61.65205	0.981132	9.91083