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ABSTRACT

In the 1997-98 school year, the town school boards of rural Rutland County, Vermont, established a regional school choice collaborative. Key program features were limits on the number of choice students from each school; no exchange of money between school boards; a lottery to determine admission at schools with excess applicants; parent/student responsibility for student transportation; and provisions related to special education, athletics, and disciplinary issues. In view of current efforts in the Vermont legislature toward expanding school choice, this paper reports on the first 4 years of the Rutland program. Surveys were completed by 60 of the 63 school-choice students, who comprised about 2 percent of eligible students. About three quarters of respondents transferred from smaller to larger schools, and two thirds moved toward a school in the region's center. No competitive improvement effects were found for either the schools or the students in the program. The relationship between school quality (test scores) and popularity of choice was weak. Student reasons for transferring were about evenly distributed among attraction to new school, dislike of old school, and social factors. Almost all students were satisfied with the change, but their average grades (low B or high C) were unchanged. Students tended to choose schools in areas of higher income. Other than satisfaction, the program produced no benefits and, if the money followed the child, would threaten the existence of several small high schools. (Contains 16 endnotes and the student questionnaire.) (SV)

Academic, Socioeconomic and Transportation Correlates in a Rural Public School Voucher System

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Executive Summary

The Rutland region high school choice collaborative is now in its fifth year of operation. Both the collaborative agreement and Act 150 of the Vermont legislature calls for evaluation of these programs.

By the use of questionnaires provided to all 63 students enrolled in the program, examining student records and retrieving school and community information from official state sources, the data for this study was compiled.

The study finds:

- 76% of the students migrated from small schools to larger schools. If this trend continued, was accelerated, or if money followed the child, many small high schools in Vermont would no longer be fiscally or programmatically viable. In the Rutland region, the existence of Poultney, Proctor and West Rutland high schools could be jeopardized.
- 67% of the students moved toward a school in the center of the region rather than laterally or out to a more distant school. Again, the long-term viability of school and community connections would likely suffer, as well as the nature and culture of outlying towns and villages.
- No competitive improvement effects were found for either the schools or the students. Choosing students had average grades of low B or high C, and they remained at this level in the choosing school. Further, the relationship between school test scores and most popularly chosen schools was weak.
- Students did not primarily choose on the basis of academic reasons, although they were an important consideration. Students reported the most favorable aspect of the choosing experience was social and friends.
- Similar to other Vermont studies, choice was available to those who could get there. This means that the student must have an automobile or a parent willing and able to transport the student. The effect is further centralization when parents work in the central area.
- Students tended to choose schools in areas of higher income. This is consistent with other Vermont and national research. The availability of transportation compounds this socioeconomic separation.

In sum, the gains accrued from the choice experiment have, after four complete years, proven illusive. Beyond students being satisfied with their decision, no academic gains are attributable to the program. On the other hand, the potentially catastrophic effects on the viability of small schools and the centralizing nature of the program suggests that the effects on Vermont communities, towns and life styles could be quite damaging. At such a price and with so little return, school choice does not appear a wise choice for Vermont.

I. Introduction

Over the past twenty years, the debate over school privatization has become vociferous. At the heart of the matter are differing visions of the purpose of public schools. Privatization advocates extol charters, vouchers, tuition tax credits and educational management organizations under the theory that education is basically a market commodity. Parents are seen as consumers and competitive market forces will improve education.

Public school proponents say that education is not a market commodity. Instead, it is the cornerstone of a democracy and is key to assuring the democratic franchise to all. Public school advocates contend that privatization will lead to greater social separation, greater inequality and a systematic deprivation of all children's right to a quality education.

These debates have centered on the large urban areas of which the Milwaukee and Cleveland experiences have been the most prominent. At the time of this writing, the Cleveland case is before the United States Supreme Court on church/state grounds with a decision expected in Summer 2002.

As school privatization efforts have become more ideological and politicized, advocates have pushed for voucher and charter types of legislation for all types of schools. However, whether these ideas can deliver on their promises as cures for big city woes is still in doubt. Political partisans have proposed these same privatization solutions for the 27% of the nation's children living in rural areas. Yet, rural areas differ from cities in social, geographic and economic structures. Very little is known as to whether these approaches are appropriate or effective for rural states and areas.[1] Clearly, we need to examine these proposals in rural contexts before making policy decisions with unanticipated and possibly negative consequences.

Cities characteristically have a public transportation system that, at least in theory, allows parents of modest means to have a number of viable school options. Rural areas do not typically have strong public transportation systems. Likewise, the concentration of impacted poverty in cities differs from poverty in rural areas. Also, rural schools are typically much smaller than their urban counterparts. Smaller schools have recently been associated with better social adjustment of children. Likewise, demographic and migration effects of school voucher schemes in rural areas will vary from that of cities.

Purpose - In addressing these questions, this paper describes the early effects of a rural public high school choice program in Rutland County, Vermont. Key questions examined include:

- What are the characteristics of students who elect to attend another school?

- Does the implementation of a choice system result in regionalization of schools and communities? Do central schools gain at the expense of outlying schools?
- What is the effect on small and local schools? Are small schools advantaged or disadvantaged?
- Does transportation availability influence a student's ability to attend another school? Are poorer students or those without parental transportation systematically deprived of choice options?
- Does the voucher system tend to segregate students by social and economic circumstances?
- Does the market model have the intended improvement effects? What are the school quality factors associated with school selection? Do students choose higher performing schools? Do students perform better as a result of rural school choice?

II. Vermont's School Choice Systems

A. The Historical System - Vermont has the nation's oldest school choice system. Starting in 1869, Vermont law empowered local towns to tuition students to private and public schools if they found such tuitioning to be a more convenient and practical means of providing universal education. Religious schools also received tuition until the 1961 *Swart v. South Burlington* Supreme Court decision declared this practice unconstitutional. For towns that do not operate a school, contract with another district, or are not a member of a union (regional) district, a child who attends a public school out of the home district has his/her tuition fully paid. If the child attends a private school, then the tuition is capped at the average announced tuition rate of the state's public schools.[2] Except for some towns with private academy arrangements, parents who select a private school with a tuition rate above the state cap must pay the remainder. Many parents have used the voucher to subsidize exclusive out of state prep school tuition and out of country experiences.

Although 39% of the towns tuition students at either elementary and/or secondary levels, this represents only about 25% of the student population. Lesser-populated towns have historically found it more expedient or financially advantageous to tuition students. Some were simply less willing to establish their own school for a variety of reasons.[3]

Given the current interest in school voucher schemes, it is surprising that so few studies have been conducted on the effectiveness of this long-standing system.

B. The High School Collaboratives - Following the recent political movement toward privatization, a "Public School Choice Collaborative Study Proposal" was advanced in the Rutland County Region during 1996. Despite the title, the proposal was not a study effort. Rather, the aim was to implement a limited public choice system.[4]

A pilot program was established for the 1997-98 school year. Key features were,

(1) the number of choice students was limited to ten from each school although different schools had different limits,
(2) no money would be exchanged, ("Money didn't follow the child.")
(3) excess special education costs would be borne by the home district,
(4) schools having more aspirants than available slots would conduct a lottery to determine admission, and
(5) transportation was the responsibility of the student or his/her parents.[5]
(6) The agreement further said, "The pilot project shall be . . . evaluated at the end of the school year" No such evaluations have occurred for any year of the program.[6]

In subsequent years, the agreement was amended to address disciplinary and athletic questions. For example, a student who was academically ineligible in one school could not transfer to another in order to play ball. Likewise, different schools adjusted conditions on the number of sending or receiving students from year to year. While the Rutland City School system was the primary driving force behind initiating the project, a change in the school board resulted in that district questioning why they were educating non-resident children at no cost. Other than these small changes, the original agreement has remained basically intact.

In 1999, the legislature mandated voluntary high school cooperatives across the state (Act 150). The Act was approved in May 2000. The bill closely followed the rules of the Rutland regional collaborative. In this Act, the Commissioner was to report annually, or before January 30, on the impact of the program. No such report has been filed but most districts have only just formed voluntary collaboratives and are not yet operational. A report describing the member districts of the various choice collaboratives is under development (as of February 2002). This report is not evaluative in nature.[7]

Within the legislature, a number of bills have been introduced in the 2001-2002 biennium to expand choice, establish charter schools, and provide tuition tax credits. Reflecting the politicized charge of this topic, these plans continue to move forward with limited evaluation of the 130 years of the historical system or the completed four years of the Rutland collaborative. The following section addresses what we know of the Vermont system.

III. Previous Studies of the Vermont School Voucher Systems

Vermont in the National Context - More than one wag has observed that the findings of studies on school privatization can be predicted by the name of the author and the sponsoring institute. The debate is heavily partisan. While any summary of this research will be hotly contested, it is fair to say that we know the following.

- We have no clear body of evidence or consensus that says that school vouchers improve achievement or improves schools. The size of any claimed achievement score changes, either positive or negative, has been small.
- Even though there are about thirty years of research, the claim that choice results in improved schools through competitive effects remains unclear. Caroline Hoxby, who is associated with pro-voucher groups, concludes positive competitive effects, but the theoretical nature of her work has not been widely accepted by others.
- School choice schools and charter schools operate very much like traditional schools. The big differences are in special purpose schools, self-selection effects by the attending population, and added marketing costs. In other words, the privatization movement has not radically reformed the structure of schools.
- In both national and international studies, choice systems separate communities and students by socioeconomic levels.
- Private school parents typically show higher satisfaction with the schools they have selected.
- There is no evidence that choice systems will save money and many project that a full-blown choice system will result in higher costs[8]

As in many places, Vermont policy makers are subjected to "studies" from partisan sources. In addition, studies from different countries, different states and urban areas are understandably considered suspect when applied to Vermont. In this babble of competing claims, policy makers fall back on their political views as to whether the policy is sound.

Consequently, Vermont and rural studies are of great importance to state policy makers.

McClaughry's Reports - John McClaughry's 1987 monograph[9] is probably the first comprehensive description of Vermont's historical tuitioning system. While some details have changed since 1987, it remains a generally accurate description of the state's system. The report provides no data on the effectiveness of the system although the author says the system works well and that parental choice is a right (p. 13).

McClaughry followed this report in 2001 with a report from the Ethan Allen Institute.[10] In this report, he described his perception of the faults of the current school finance formula and advocated that it be replaced with a school voucher system. He recited the case for schools as free market enterprises and quoted findings from the Cato Institute, the Brookings Institute and other sources associated with the pro-voucher movement. However, other than sidebar quotes and testimonials, he presented no research evidence to document the effectiveness of Vermont's program.

Research Results from Southeastern Vermont - Gordon Schnare's 1994 doctoral dissertation[11] is among the few empirical studies of Vermont's historical choice system. Through questionnaires and structured interviews, he followed an entire class of graduating sixth graders.

He found choice decisions to be a two-part process: The formal process relied on school visits, school information and examination of curriculum. Mothers' were the key information gatherers.

However, the real deciding force was the informal and subjective process. The key informal factors in choosing a high school were socioeconomic status of the family, and transportation/distance from home. Associated with socioeconomic factors was attending school with friends. This was an important consideration for many.

Parents tended to select schools based on similar socioeconomic levels and where they felt their children would "fit-in." In general, lower socioeconomic children picked the blue-collar school and the wealthier children picked a white-collar school.

Despite the tendency to choose a school where their child fit-in, "many parents felt powerless to choose the school they felt best for their child" (p.184). Schnare found that lower income families "found it far more difficult to exercise their choice of schools. . . . Transportation limited the choices for several families, particularly for those with lower incomes, and caused great anxiety for many parents" (p.178).

Distance to the school was highly inter-related with transportation as an inhibitor of effective school choice. Participation in extra-curricular activities was also inhibited by transportation arrangements as, in many cases, the parents work location and work hours were decisive factors.

In terms of selecting private schools, poorer families were discouraged from pursuing private schools because of costs not covered by the home school district and the hidden costs of the private schools.

Schnare summarized his results by saying, "Choice works best for those who are economically and educationally advantaged."

Research Results from Northwestern Vermont - Herman Meyers, while serving as a professor at the University of Vermont, conducted a longitudinal study of school choice in Northwestern Vermont.[12] Nine elementary school cohorts from 1985 through 1995 from three elementary schools were followed as they went through high school. School records on 239 students were analyzed and structured interviews were held with fifteen parents from each of the three sending schools.

Parents said their choices were made on the basis of perceived quality of the school but this was rationalized on many different levels.

> "The motive of school quality consistently fades into the background of other reasons while proximity of the receiving school and the perception of "nurturance" or welcome of the receiving school to choosing students rises to higher levels of importance." [13]

Tied to socioeconomics and fitting-in, Meyers found the experience of earlier generations to be a factor in nurturance. Transportation was often a deciding issue. Long bus rides of an hour-and-a-half eliminated choosing regardless of the importance of other factors.

Based on school reputations of quality, "we would have expected (parents) to choose the "better " receiving school. They didn't." The deciding factor was "student acceptance" which "correlated with the income levels of each of the communities."

> "That is to say, the higher income community tended to send its children to the higher income receiving school, while the lower income community tended to send its children to the lower income school."[14]

Meyers concludes that choice programs that do not "heavily subsidize transportation to and do not place some income screen that favors low income children may result in an increase in segregation along social class lines." Market forces just don't behave like predicted with low-income people, he found.

"What will happen, is that as resources are withdrawn from poor rural schools that are "punished" by government policy to withhold resources for poor performance, the children who are trapped in those schools by circumstance will lose both opportunity to learn and their birthright."

Research Results from the Friedman Foundation - Christopher Hammons, a Houston Baptist University professor, released a report in February 2002 on his analysis of the effects of tuition systems in Vermont and Maine. The report was not published in a scholarly journal or for a professional society but was developed for the Milton and Rose D. Friedman foundation, whose aim is to advance school choice initiatives.

Similar to McClaughry's work, the historical background is reviewed and numerous tables and charts of legislative provisions are included in the appendices.

As contrasted with the other studies, he did not clearly report his methodology. Apparently, he used correlation methods[15] to predict an educational achievement index based on a school choice factor (measured as receipt of tuition money), a poverty factor and a "competition score." Competition was based on proximity of schools to each other. While he did not report his actual correlation coefficients, he concluded that competition results in better school performance, benefits do not accrue to any particular demographic group, and that "there is a financial benefit of school choice that extends beyond school performance."

Confounding his conclusions, the greatest receivers of tuition monies happen to be Vermont suburbs and small city districts who have more affluent populations who, not coincidentally, have high test scores (see p. 33 of Hammons' report). Thus, whether he was measuring choice effects or wealth effects is not clear.

Contrary to most published work, he concludes that poverty and urbanization are not strong determiners of achievement scores. However, since he used county level measures of poverty and urbanization, the effects of these factors are washed out.[1] For example, since Chittenden county poverty data were used, both Winooski and South Burlington were given the same poverty ranking. Likewise, by using countywide urbanization measures, compacted Rutland City is ranked the same as the sparseness of Hubbardton's Taconic Range.

The use of county level data is puzzling in light of the easy availability of school and town level poverty and population density measures. As he doesn't clearly define district or spending, it cannot be determined if his measure of spending per pupil includes elementary expenditures.

Regarding transportation, he quotes a Maine Department of Education employee as saying that transportation has been a relatively minor issue. The issue is given no further treatment in the study except for an acknowledgment that geography and surrounding schools could be factors. Both Schnare and Meyers found transportation a significant factor, as did Maddaus in his study of the Maine system.[16]

While Hammons clearly concludes that competition has a positive effect for all groups of students and is financially efficient. Reconciling his findings with other studies that reached opposing conclusions is not easily accomplished due to the opaqueness of his analysis.

IV. Methodology

The present study is descriptive in nature. It tells what happened as a result of the pilot project. Where strong trends were noted, statistical tests were applied to determine if these relationships were due to an underlying cause or were merely chance occurrences.

The Rutland regional school choice collaborative consists of seven high schools in the Rutland region ranging in size from 150 to 1100 students each in grades 9-12. Over the previous four years of this program (97-98 through 00-01), 63 students elected to attend another school and are still enrolled in their choice school. Thirteen choosing students graduated and are not included in this analysis.

Through cooperation with the other schools, open-ended questionnaires were designed and collected by Rutland City Schools Superintendent Mary Moran (see Appendix A). These were completed by 60 of the 63 choice students. The questionnaires asked for general information, reasons for choosing, most positive features, most negative features, co-curricular participation, transportation, plans for further education and the like. The questionnaires were

[1] Further, he apparently entered poverty, urbanization and per pupil spending into his equation after he entered the competition score. The order that variables are stepped into a multiple regression equation may have substantially and artificially diminished the effect of the other variables.

coded and scored by Debbie Etzler of the Rutland Northeast Supervisory Union. Each superintendent cooperated in collecting the data.

Then, academic performance data was collected from each school for each student and transformed into a common grade scale. School level data was also collected on achievement scores, poverty and income from the Vermont Department of Education web site and by data requests of the state agency.

V. Results

A. Descriptive Statistics:

1. Enrollment - Out of 3216 enrolled students, 63 participated in the choice system for an enrollment rate of 1.96%. On the face, this is an affirmation of the affiliation of the student with their home school and community.

However, if Vermont follows the international trend, this number would likely rise over time. While annual caps are in place, these have a cumulative effect over time that is seen in the Rutland regional data.

Programs without caps and where money follows the child could cause the closing of small and/or more outlying community and town schools.

2. Sex - 35 of the 63 participants are female (56%).

3. Grade Entered the Program:

34	Ninth Grade
19	Tenth Grade
6	Eleventh Grade
4	Twelfth Grade

The smaller numbers entering in the eleventh and twelfth grades are primarily composed of students whose families moved, and they wished to complete high school with their peers. By the eleventh grade, most students have decided that they will stay with their home school.

4. Distribution by School - Table I shows the distribution of sending and receiving students by school.

Regardless of size, between six and nine students exited each school except for West Rutland. For this school, 15 exited out of an approximate total of 150 students in grades 9-12. They also attracted four students into the program. If money followed the child, it is questionable if the school would be able to offer a comprehensive program with such a net loss of students and money.

TABLE I								
SCHOOL CHOICE PLACEMENTS 2000-01								
SCHOOL TO:	Fair Haven	Mill River	Otter Valley	Poultney	Proctor	Rutland	W. Rutland	
SCHOOL FROM:								TOTAL FROM
Fair Haven		2	1	0	2	0	1	6
Mill River	0		0	1	0	8	0	9
Otter Valley	1	0		0	2	6	0	9
Poultney	5	0	0		0	1	0	6
Proctor	0	7	1	0		0	1	9
Rutland	1	4	1	0	1		2	9
West Rutland	2	5	0	0	1	7		15
TOTAL:	9	18	3	1	6	22	4	63

5. Centralization and Decentralization Effects - The maps in Tables II and III show the centralizing effects of the school choice program. Forty-two of the sixty-three students (67%) go toward the geographic center. Only one-third moves away from the center or to another school on the periphery. The Barre-Montpelier choice region reports similar findings but has not documented these shifts.

The reasons are parents' jobs, the roads themselves and the limited transportation systems (Technical center buses and "The Bus") gravitate toward the center. Thus, students can easily move toward the center but find it harder to move along the periphery or outward.

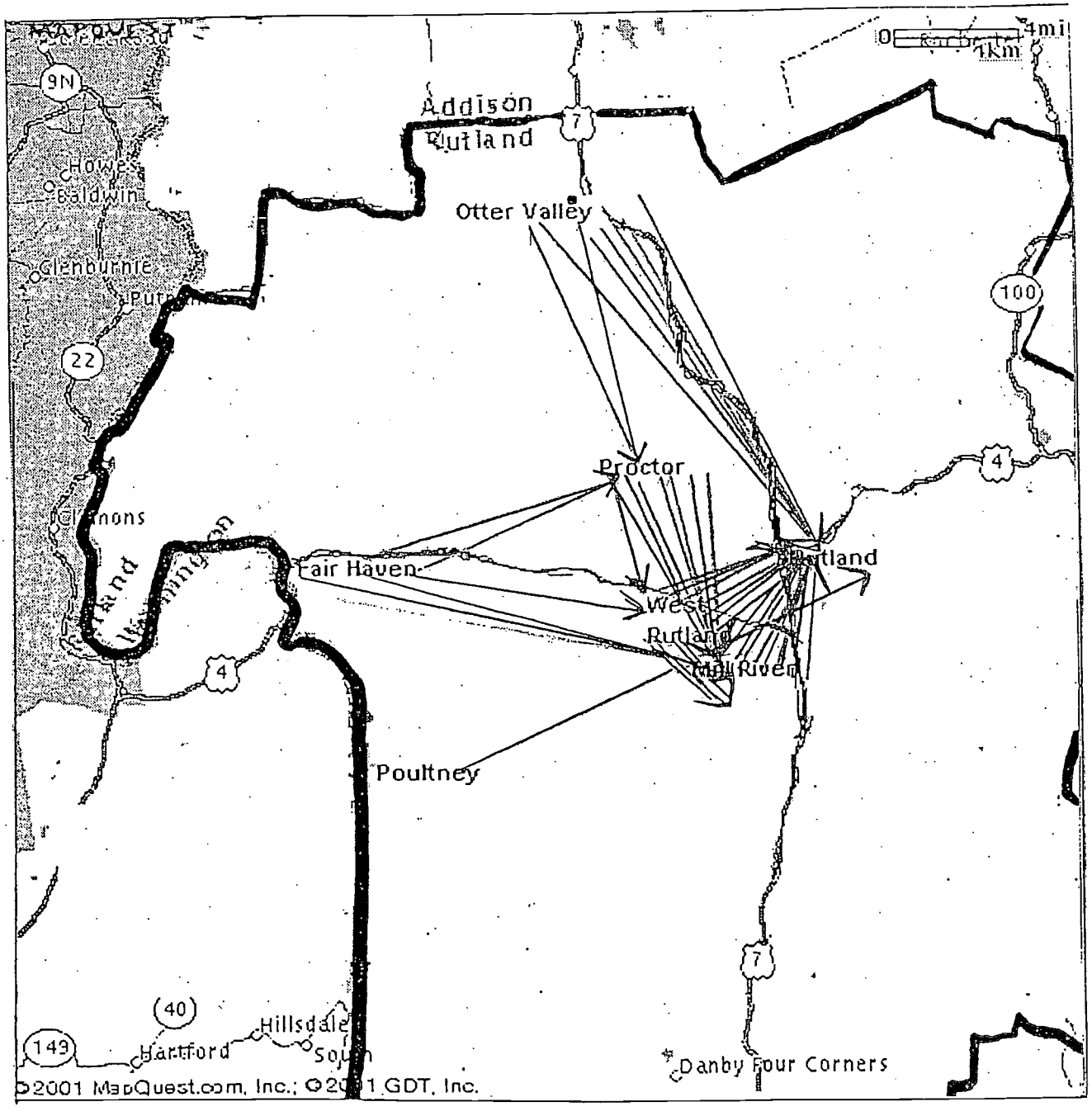
To see if this pattern represented a systematic trend or was merely the result of chance, a chi square statistical test was conducted. This pattern could occur by chance only 1% of the time.[2]

The implications for local control, community well being, and the viability of smaller high schools are self-evident. If money follows the child, the financial effects on very small high schools such as Proctor, West Rutland or Poultney could precipitate school closings. While Proctor gained as many as it lost, whether this would be sustained given the centralization and movement to large school trends remains a significant question for the future.

[2] Chi Square = 7.0, df=1, p=.01

TABLE II

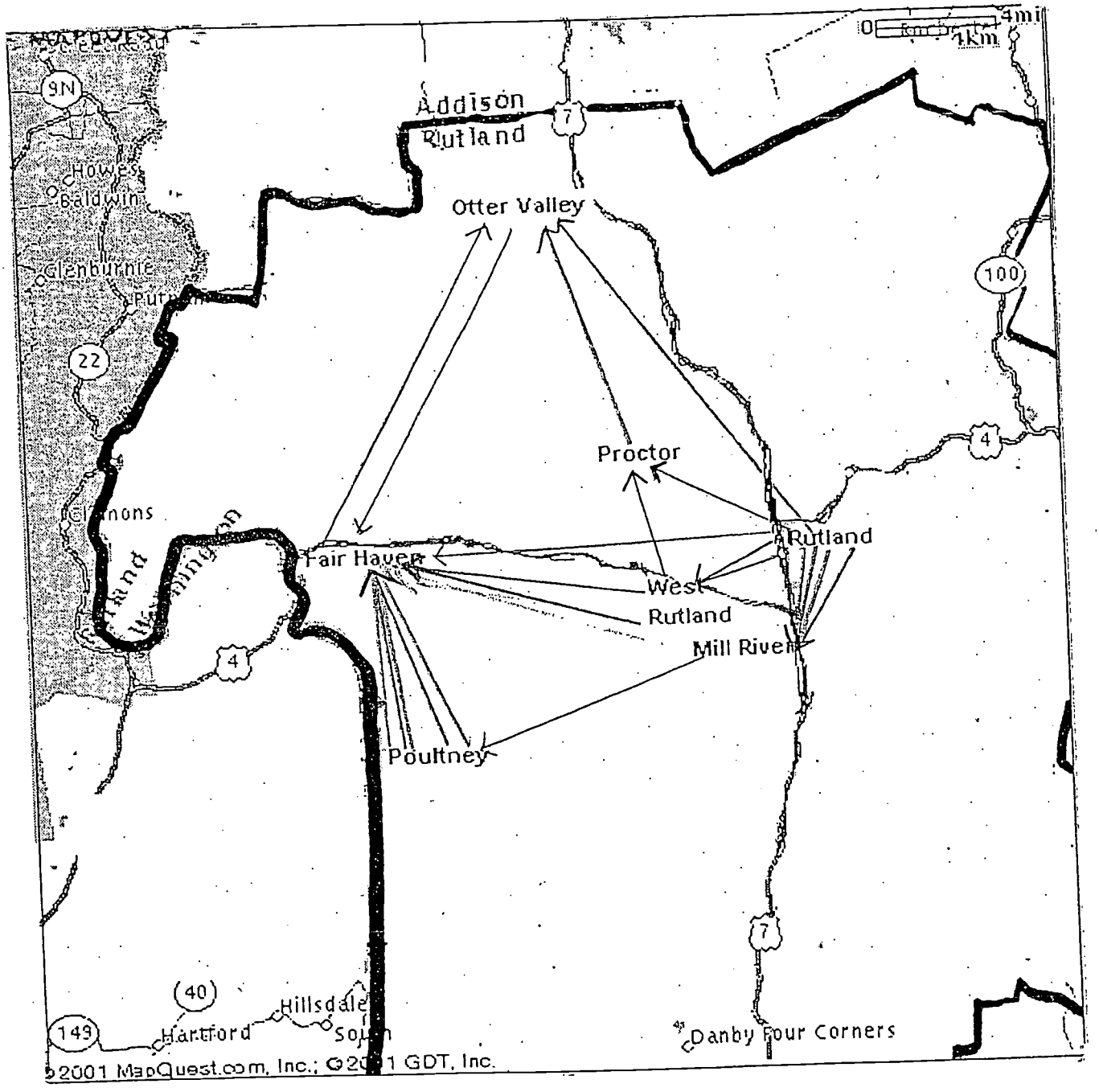
Migration Toward The Center



Forty-two of sixty-three students (67%) moved toward the center

TABLE III

Migration Out From The Center



Twenty-one of sixty-three students (33%) moved away from the center or laterally along the periphery.

6. Student Reported Reasons for Choosing a different school -

Primary Reasons -	N.	Percent of Responses
Recently Moved and wanted to stay in original school	11	18%
Disliked Home School	18	30%
Attracted to Choice School	18	30%
Parent/ Family factors	5	8%
Social/Friend factors	2	3%
Wanted larger or smaller school	3	5%
other/ no response	4	6%

Secondary Reasons	N.	Percent of Responses
Recently Moved	1	2%
Disliked Home School	9	15%
Attracted to Choice School	15	25%
Parent/Family factors	1	2%
Social/Friend factors	4	7%
Wanted larger or smaller school	1	2%
other/ no response/ none	29	47%

"School Quality" - Only 30% gave attraction to programs or elements in the desired school as a primary reason. In secondary reasons, 25% say that attractions of the receiving school were factors. While school quality is important, it is simply not the deciding factor.

Reasons for choosing are complex. Twenty percent (primary plus secondary reason) were actually choosing to stay in their home school after their parents moved. Certainly, a large number of choosers were choosing to get away from an undesirable situation. Whether the undesirability was with the school itself, with certain teachers, or the result of unsatisfactory peer relations could not be determined.

7. Were you satisfied with your experience?

Yes	58	97%
No	2	3%

8. What did you like most about your experience?

Primary Likes		
Students	7	12%
Teachers	9	15%
Social/Friends	21	35%
Programs (academics/sports)	9	15%
Other	14	23%

Secondary Likes		
Academic/ Sports programs	3	5%
Social/Friends	2	3%
No response/other	56	92%

Compare these responses with the reasons for choosing. Social and student factors were the primary reasons for satisfaction (47%). Teachers and school program reasons together represented only 30% of the primary reasons.

9. What did you least like about your experience?

Transportation problems	9	15%
Programs/climate	12	20%
Social Factors	12	20%
Other	8	13%
Blank/Nothing/Don't Know	19	31%

The dislikes must be considered in terms of question #7 above, which found 97% saying they were satisfied with the experience.

10. Participation in Activities		43	72%
Sports	57%		
Fine Arts	12%		
Community	3%		
None	28%		

This group of students is active. In some cases, students intentionally chose a school with an emphasis on a particular sport. The Rutland region has historically had acrimony over high school football "recruiting."

Without sports activities, the numbers of co-curricular activities declines rapidly. The issue raised is whether schools should become specialty schools in rural areas where transportation is problematic.

While sports are a vital part of secondary school experiences, they are not part of the criteria by which schools are to be evaluated under the new federal law.

11. Transportation

Parent Drove	23	38%
Self Drove	22	37%
Relative/Teacher	7	12%
Drove Self/Friends	5	8%
Other	3	5%

With 75% of the students being driven by a parent or driving themselves, choice options exist for those with a parent either (1) willing and able to drive, (2) who works in a conveniently close area, or (3) who is able to supply an automobile for their child. Certainly, this is not an opportunity available equally to all students.

12. Post High School Plans

College	44	73%
Other Schooling	3	5%
Military	3	5%
Work/Other	6	10%
Unsure/Blank	4	6%

These results parallel the Vermont Student Assistance Corporation's senior survey results with only small differences within categories. Thus, in terms of future plans, little difference is noted between choosers and non-choosers.

B. Academic Rankings and School Choice -

The primary rationale proposed by school choice proponents is that students are drawn to academically excellent schools. Or, as Meyers points out, the *perceived* higher performing schools.

In the Rutland County example, as Table IV illustrates, the actual test results do not lend strong support to the market/ quality assertion. In this example, the mean normal curve equivalent (MNCE) scores on the state's New Standards Reference Examination are used for comparison purposes. MNCE scores are designed to allow appropriate comparisons between schools. Verbal and math reading scores for the SAT tests were also ranked. In using SAT scores, the percent tested is an important factor that frequently mitigates against comparing schools. However, in the Rutland County case, all the schools (except Poultney) tested between 60% and 68% of their school population.

- The school with the best sum of academic rankings is Otter Valley. Yet, that school is well down the ranks in attracting only three choice students. Transportation and location puts Otter Valley on the periphery of the region.
- The school attracting the most students (Rutland High) has the second highest composite scores and has the advantage of being in the center of the geographic area.
- Mill River, with the highest percentage of their population as choice students (3.6%) and the second highest absolute numbers is ranked only fourth out of seven schools on composite achievement rankings.
- Fair Haven which attracted the third highest number of choice students tallies sixth of seven in the sum of academic ranks.

There is only a weak correlation between the sum of test score ranks (Spearman Rho correlation coefficient = 0.36) and the number of choosing students. That is, students did not primarily select their school on the basis of academic programs or quality as expressed by test scores. This corresponds with the students' stated reasons for choosing a school.

Table IV
Academic Measures

School	# Students Received	% of Student Body	NSRE MNCE Reading Gr 10	NSRE Reading Rank	NSRE MNCE Math Gr 10	NSRE Math Rank	SAT Verbal	SAT Verbal Rank	SAT Math	SAT Math Rank	SAT % Tested	Sum of Ranks
Rutland	22	1.90	69	1	62	3	528	2	508	3	68.00	9
Mill River	18	3.60	64	4	62	3	493	4	509	2	66.00	13
Fair Haven	9	1.50	62	5	59	5	485	5	483	6	60.00	21
Proctor	5	3.50	68	2	60	4	541	1	506	4	60.00	11
Otter Valley	3	0.60	67	3	64	1	526	3	538	1	63.00	8
West Rutland	3	2.00	60	7	55	6	453	7	488	5	68.00	25
Poultney	1	0.40	61	6	64	1	462	6	466	7	48.00	20

C. School Size and Choice -

Forty-seven of sixty-two or 76% of the students chose a larger school than the one they previously attended.

Using a conservative statistical analysis, this pattern could have occurred by chance only one time in a thousand.[3] Thus, whether friends, perceived program quality, transportation arrangements or combinations of all these factors, students consistently chose larger schools.

Assuming an open enrollment system and money following the child, if this trend were to continue, if would effectively close the smaller and local high schools in the state. Even if money did not follow the child, the effect on the ability to offer a breadth of programs would be devastating.

[3] Chi square = 16.5, df=1, p=.001

D. Wealth and School Choice

According to the school choice research literature, schools will tend to segregate themselves by socioeconomic levels.

Mill River, composed of more suburban towns (although not suburban by the standards usually applied across the nation) has the highest median income and adjusted gross income. They also have the highest percentage of choice students and the second highest absolute number of students even though academic marks are only fourth of seven.

The second highest percentage of incoming choice students is in Proctor, which is also second in highest median income and adjusted gross income. This changing small community and former marble center is considered to offer unique programs for students.

Rutland, which attracts the highest number of choice students, shows fifth in wealth. Rutland City draws students from towns that do not operate high schools and which are more affluent (Rutland Town, Mendon, Chittenden). Consequently, the town's low wealth factor (with a center core and the highest concentration of food stamp recipients) is not representative of the actual school population.

Otter Valley is an anomaly with the third highest wealth and highest composite achievement scores and the least percentage of incoming choice students, As noted earlier, they are geographically separated and the commuter flow goes against them.

West Rutland and Poultney are in the bottom half of the distribution on wealth and scholastic measures and attract few choice students. West Rutland (3 inbound students) is closer to the center than Poultney (1 inbound student). Poultney is also the most geographically isolated of the schools.

Fair Haven, with nine inbound students and a low median income, draws 5 of their seven students from the even smaller schools and low gross income towns of West Rutland and Poultney.

Thus, there is a clear pattern of choice students selecting more affluent schools although the picture is complex. Distance from the center, and size of school are also significant factors.

In analyzing the data using the Spearman Rho correlation, a coefficient of 0.32 emerges between median income and attraction of choice students. This relationship is artificially low because of the two anomalies of Otter Valley and Rutland: Otter Valley because it attracts few students, and Rutland because the town wealth indicator does not represent the average family wealth of the actual student population.

Table V
Community Wealth Measures

School	# Students Received	% of Student Body	% Free & Reduced Lunch	% Food Stamps	Adjusted Gross Income	Median Income	Median Income Rank
Rutland	22	1.90	13.00	22.50	$17,245	$37,590	5
Mill River	18	3.60	17.30	9.80	$17,786	$43,311	1
Fair Haven	9	1.50	19.30	18.10	$15,954	$37,008	6
Proctor	5	3.50	18.10	8.80	$17,269	$42,564	2
Otter Valley	3	0.60	14.70	11.90	$16,721	$39,750	3
West Rutland	3	2.00	33.40	18.90	$15,917	$38,600	4
Poultney	1	0.40	19.70	13.20	$15,445	$36,122	7

3. Academic Achievement of Choosing Students: Before and After

The grade averages of all students before and after choosing were collected from the cumulative files and scaled to the same traditional grade average. Certainly, there are grading differences between teachers, courses, curriculum and schools. With the great variety of different teachers and number of grades for each student, these elements are assumed to have evened themselves out as students go across the various school lines.

Average Grade of choice Students at Home School	81.6
Average Grade of choice Students at Choice School	81.3

Certainly, choice students did not improve their grade averages by transferring to another school. In fact, they went down by a slight amount.

Another interesting fact is that choice students, on average, are far from being at the top or the bottom of their classes either before or after choosing. They are low B or high C students when they leave the home school and they are still at the same or lower level after one or more years at the choice school.

To look at school effects, the averages before coming to the choice school were compared to those after they were in the choice school for at least one year.

	Incoming Average	Choice School Average
Fair Haven	77.59	78.03
Mill River	82.16	80.48
Otter Valley	78.40	81.67
Poultney	*	*
Proctor	82.83	82.46
Rutland	84.52	84.74
West Rutland	75.53	76.75

Rutland choosers saw only a fraction of a point increase and Mill River students went down a point and a half. While the number of students is too small to be conclusive, Otter Valley had over a three-point gain but was not a frequently chosen school.

VI. Summary and Conclusions

This study of the Rutland region choice collaborative after four years of operation provides strong and telling evidence of the effects of this program even though the program only involved 1.92% of the possible students. The literature suggests that this small proportion would likely increase over time. Recent research out of Boulder Valley, Colorado shows that such programs can cause a mass exodus from particular schools and to particular schools.

The Effect on Small Schools - The most significant finding is the effect on small schools (statistically significant at the .001 level). Three-fourths of the choosers went from a small school to a larger school. If the program grew in numbers and/or if money followed the child, then the financial viability of small schools across the state would be seriously jeopardized. The social wisdom of closing small schools and transporting children even greater distances to schools must be carefully considered.

Likewise, the Vermont value of "local control" must be weighed as parents and community members become even more distant from their schools. While parents can "vote with their feet" in a choice system, the notion of a local board effectively responsive to the citizens is eliminated. The controlling board would often be in some distant town. In the case of private schools, the controlling boards are not typically elected by any citizenry or taxpayer.

Centralization and the Effect on Rural Schools - The second most significant finding is that students migrate toward the center. Thus, the effect is to regionalize education. This effect is statistically significant at the .01 level. Like the small school effect, we must consider the social and

community effects of establishing financial conditions which will cause the closing of town schools which have been a vital element of Vermont communities for sometimes, more than a century. Increased centralization would have huge impacts on traditional Vermont lifestyles.

Pro-voucher researchers such as Hoxby and Hammons measure "competitiveness" by the number of schools in a given region. It is ironic that, in this case, the voucher program could have the effect of decreasing the options in the Rutland region by potentially forcing schools to close.

Competitive Effects of School Quality - This study did not find a strong relationship between the quality of school programs (as measured by test scores) and students choosing to attend a particular school. In fact, while students said school quality and programs were important, they were far from being a controlling factor in a complex decision-making process. When examining what students liked about their choice experience, social and friend factors were the most important considerations. Further, students who chose a new school had grade averages equivalent to "low B" or "high C." After engaging in the choice program, their grade average remained at this same mediocre level.

This study found only limited evidence that students chose higher scoring schools and no evidence that student performance improved as a result.

Transportation - Consistent with the work of other studies in Southeastern and Northwestern Vermont, choice existed for those who could get there. Thus, the student had to have an automobile, a parent willing to transport or a parent who could drop-off and pick-up the student at the selected school. Obviously, this becomes another force tending toward regionalizing school systems. Fears have been raised in Vermont about "one big school system." The combination of transportation, large schools, and centralization raise similar issues about student anonymity and powerlessness at the time of increasing evidence on the importance of small schools in the social adjustment of children.

Socioeconomic segregation - Choice of schools is correlated with wealth of the school community. This correlation is modest primarily because the socioeconomic levels of Rutland City are different from the characteristics of the high school student body. Transportation availability is also a key economic separator in that 45% drove themselves or drove others. Having a vehicle or a parent available to drive means opportunities available to some but not to others.

On the positive side of the ledger, students reported that they were satisfied by their choice decision and the reported number of dislikes are both relatively small and must be considered in the context of broad support by the choosing students themselves.

All policy decisions have positive and negative outcomes. For the Rutland Region, the advantages of competition are simply not born out. Students are not selecting schools on the basis of school quality and their academic rating is not improving as a result of choosing. Likewise, socioeconomic segregation is suggested not only by this work but by other Vermont research, as well.

The price of choice policies is most high on small schools and rural schools. Many would likely have to close if the program were expanded or changed to have money follow the child.

While school choice is politically and ideologically popular, the absence of learning gains at the high cost of possibly losing small schools, regionalizing schools, removing governance from the community and segregating Vermonters from each other does not suggest it is a wise course for Vermont.

Peer Review Notes

An early draft of this report was shared with the superintendents of the Rutland Choice collaborative to check for errors in the factual description of the program and for errors in interpretation. In addition, the paper was forwarded to two individuals versed in statistical methods and the school voucher literature. Advance copies were also distributed to four other knowledgeable individuals for critique and review. These reviews provided valuable critiques and insight. The authors are most appreciative of this input. However, the authors are solely responsible for this paper and its conclusions.

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[1] There is little research on the effects of choice systems for suburban communities, as well.

[2] Hammons, Christopher W. 'The Effects of Town Tuitioning in Vermont and Maine>' Publication of the Milton & Rose D. Friedman Foundation. Indianapolis, 2002

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[3] McClaughry, op. cit.

[4] "Public School Choice Collaborative Study Proposal," Rutland City Schools Memorandum, 9/24/96.

[5] "Rutland County Public School Choice Collaborative Articles of Agreement, 1997-98.

[6] The Otter Valley Union High School commissioned an independent study to interview the students who said they were interested in attending another school but no other evaluation data was collected by the collaborative.
[7] Telephone conversation with William Reedy, SDE legal counsel, February 19, 2002.
[8] Center on Education Policy. "School Vouchers: What we Know and Don't Know . . . and How We Could Learn More>" Washington, DC, June 2000. < www.ctredpol.org >

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[9] McClaughry, op cit
[10] McClaughry, John. "Schoolchildren First." An Ethan Allen Institute Report. 2001. 32 pages
[11] Schnare, Gordon. "Choosing a High School in a Rural Context." Doctoral dissertation, University of Vermont, 1994.
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Meyers, H.W. "School Choice Lessons Learned from Research in Britain and Vermont." School Choice Forum. State House. Montpelier, VT February 6, 1999
[13] Meyers, op. cit., 1999.
[14] ibid.
[15] In one section of the text and in one footnote he mentions that he used a multiple regression approach although he provides no other details of his analysis.
[16] Maddaus, John. "The problem of "Location" in Parental Choice of School." U. S. Department of Education, Washington, DC, 1992.

RUTLAND COUNTY PUBLIC SCHOOL CHOICE
STUDENT QUESTIONAIRE
MARCH 2001

- We are asking for your assistance in gaining feedback on the Rutland County Public School Choice Program from all those who have participated in the program since it began in 1996.
- All individual information will remain confidential.
- We plan to use the summary information to assess the strengths and needs of the program.
- Thanks for your help!

Name: _____ **Year of Graduation:** _____

Name of Home School: _____

Choice School you Attended: _____

Grade in which you Entered: _____

What is the <u>main</u> reason you chose to participate in the school choice program?

Were there any other reasons you chose to participate in the school choice program?

Overall, are/were you satisfied with your experience? **YES** **NO**

What do/did you like most about your experience?

(Over Please)

What do/did you like least about your experience?

Do/Did you participate in activities at your choice school? If so, what activities?

How do/did you arrange transportation to your school of choice?

Did you leave the Choice program at any time? If so, why?

What is/was your overall academic average? _____

What are your post-high school plans?

Additional Comments/Suggestions:

- **Please return this questionnaire to your guidance counselor, as soon as possible, but no later than May 1, 2001.**

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