

## **EQUALITY OR CHOICE: DETERMINING OPTIMAL SCHOOL BUSING STRATEGIES**

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*Often there are conflicting interests when policy decisions are made, and the optimal choice is difficult to determine. In these cases, information is vital to the decision making process. McBurg County School District is a school district that must accomplish Title I policy goals while optimizing their financial resources. In transporting students from districts to different schools, the county needs to optimize based on dual and conflicting goals of cost of transportation while maintaining economic balance between the schools. It is also important to ensure that districts receive equal resources, regardless of the economic situation of the student population. Stakeholders in the decision include taxpayers, parents, and decision makers. All information is masked to protect the privacy of the schools involved.*

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### **A LITTLE DISTRICT WITH BIG CHALLENGES**

The McBurg County School District (MCSD) is located in McBurg County, a small Southern county that maintains a student population of 4,200. The county maintains a modest economic population, with average yearly income reported at \$52,000. In order to effectively distribute the number of students to each of its 9 schools, the district has been split into 3 zones: Central, North, and South. This change allows the district to effectively manage and deliver learning and instruction, as well as human and financial resources. The newly restructured zones will continue to place resources and administration closer to parents, while at the same time helping to reduce overall district costs.

During the time of the zone reorganization, the county's Title I program was also reevaluated. The purpose of the Title I program is to "ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging State academic achievement standards and state academic assessments" (Title I). The creation of zones has

posed challenges for achieving some of the Title I goals, specifically Title I: Goal 3 and Title I: Goal 5 (see below).

**Title 1: Goal 3** - closing the achievement gap between high and low performing children, especially the achievement gaps between minority and nonminority students, and between disadvantaged children and their more advantaged peers.

**Title 1: Goal 5** - distributing and targeting resources sufficiently to make a difference to local educational agencies and schools where needs are greatest.

In order to address these goals, the county's Title I department provides supplemental support to the county's Title I schools in alignment with the zones. The three current zones Central, North and South contain different demographic mixture of students. The average income for each of the zones is shown in Table 1. Revenue is collected for the district primarily based on taxation of assets. People with higher incomes tend to have more valuable assets. Total revenue for the district is \$5,000,000. The amount of revenue contributed by citizens in each of the districts is shown in Table 1. The Central zone is an economically depressed area which has 530 Elementary School students, of which 450 are classified as poor. While there have been efforts to revitalize the downtown area, none of them have been successful. The North Zone has 350 elementary school students, of which 250 are classified as poor, while the South Zone, a more affluent area, reports 520 elementary school students, out of which 20 are classified as poor.

**TABLE 1**  
**INCOME AND REVENUE DATA FOR MCBURG COUNTY**

	<b>Income Data</b>	<b>Revenue Data</b>
<b>Zones</b>	<b>Median Yearly Income</b>	<b>2011 Revenue</b>
Central	\$20,000	\$500,000
North	\$51,000	\$1,500,000
South	\$85,000	\$3,000,000
Overall	\$53,000	\$5,000,000

The district's Planning Services office is responsible for developing school boundaries. Students are assigned to a home school based on their residential address. Each McBurg County address has been assigned an elementary, middle, and high school known as the home school. Students are automatically assigned to their home school upon enrollment. Transportation is provided to the student's

home school. Feedback from the community is valuable to the boundary process, which includes public meetings, workshops, public hearings, and presentations to the Board of Education, culminating in a Board of Education vote.

When McBurg County was considering school boundary changes, a series of workshops with parents and community residents were held to gather input on proposed boundary options for the future school year. During these meetings, McBurg County staff provided information about boundary options and collected feedback from workshop participants. At these meetings, the distribution of revenue was discussed. In order to meet Title I goals, it was suggested that each of the zones receive an equal distribution of the district's revenue. The parents in each of the districts were divided in their reasons for supporting or opposing this plan. Parents in the affluent South zone did not want to share their resources with the other zones and worried that their children would suffer after the implementation of this plan. On the other hand, parents in the Central zone were pleased that their children would be gaining resources they had previously lacked.

Income distribution, however, does not adequately address all the Title 1 goals. Another suggestion to help meet Title 1 goals suggested bussing children to different zones in order to create a demographic balance in each school. Parents were equally concerned about the implementation of this plan. Whether or not they supported the overall idea of the plan, none of the parents wanted their children to be bused out of their home school. All of the parents were concerned that their children may be forced to leave their neighborhood friends. Parents in the South zone were worried about their children's safety if they were bused into poor neighborhoods. They also were skeptical that the quality of the education would be comparable to the schools in their affluent zone. Parents in the Central zone were concerned that their children would be bullied if they were inserted into schools where they knew few people and the other children in the school were more affluent. After the period of feedback, a decision was reached to implement busing at the elementary school level and evaluate the success of the program before proceeding with the middle and high schools.

### **ELEMENTARY SCHOOL BUSING**

The McBurg County School Board was tasked with calculating the optimal plan for distributing the students between the elementary schools. There are three elementary schools, Riverdale, High Point, and South Seas, serving the three districts. Riverdale has a capacity of 400 students, High Point 500, and South Seas 500. Table 2 contains mileage data and indicates the number of students of each category. The mileage figures represent average miles traveled by a student within the county on the shortest route based on the distance from strategic community bus stops to schools. Table 3 displays the corresponding transportation costs. The

cost figures are based on the assumption of a fixed transportation cost of \$15.00 per student per year and an additional annual cost of \$8.00 per student for every mile traveled beyond the initial mile (e.g., 4 miles:  $\$15 + (3 \times 8) = \$39$ .)

**TABLE 2**

**TRAVEL, DEMAND, AND CAPACITY OF ZONES AND SCHOOLS**

<b>Zones</b>	<b>Distance in miles</b>			<b>No of Students</b>	
	<b>Riverdale</b>	<b>High Point</b>	<b>South Seas</b>	<b>Poor</b>	<b>Non Poor</b>
Central	4	8	12	450	80
North	5	7	14	250	100
South	10	3	5	20	500
<b>Capacity</b>	<b>400</b>	<b>500</b>	<b>500</b>	<b>1400</b>	

**TABLE 3**

**TRANSPORTATION COSTS PER STUDENT**

<b>Zones</b>	<b>Transportation Costs (\$)</b>		
	<b>Riverdale</b>	<b>High Point</b>	<b>South Seas</b>
Central	39	71	103
North	47	63	119
South	87	31	47

The basic requirement is that each and every student must be assigned to a school. It is important to transport these students with minimum cost to the county while ensuring that each school gets a representative mix of poor and non-poor students.

The county is grappling with the issues of budgetary constraints and the need to ensure economic representation of students across the three schools. They would like to get an idea of what would be the minimum cost to transport these students without considering economic imbalance. Then they would like to consider how much extra it would cost to minimize the economic imbalance.