A COMPARISON OF THE TOWNSHIP AND
COUNTY AS UNITS FOR BUYING
SUPPLIES AND EQUIPMENT

By

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Contribution to the Graduate School
Indiana State Teachers College
Number 300

Submitted in Partial Fulfillment
of the Requirements for the
Master of Arts Degree
in Education

1937
The thesis of James Staley

Contribution of the Graduate School, Indiana State Teachers College, Number 300, under the title

A Comparison of the Township and County as Units for Buying Supplies and Equipment

is hereby approved as counting toward the completion of the Master's degree in the amount of ___ hour's credit.

Committee on thesis:

E E Ramsey

J R Shambaugh

B Jones, Chairman

Date of Acceptance May 25, 1937.
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CHAPTER I

INTRODUCTION

A. Purpose of Study

The purpose of this study is to determine the saving, if any, that would result if townships were organized into larger units for the purchasing of school supplies and equipment.

1. What saving would result if the townships were organized into units having a school enrollment of about 2,000 pupils?

2. What saving would result if they were organized into units having a school enrollment of about 4,500 pupils?

3. What saving would result if they were organized into units having a school enrollment of about 14,500?

B. Need of Study as Shown by Opinions of Writers

Practically all that has been written favors the large units. W. E. Sheffer, superintendent of school at Manhattan, Kansas, says,

... the authority for purchasing should be centralized. Marked savings can be effected by following business-like procedures in making actual purchases. Whereas business organizations take advantage of wholesale buying, many schools buy at retail with markedly higher costs. (1024, p. 22)

———

Scars Journal, Vol. 31:1--4, 5
If the board employs a superintendent, he can well be made the purchasing agent. Then this duly authorized agent should be held strictly accountable for the economical purchase, and delivery of all materials bought. He should develop and use a system of requisitions and purchase orders which show the authority for every single purchase, the purpose for which it is to be used and the date of its receipt.¹

C. V. Keltz, business agent of the Bernardino City Schools of San Bernardino, California, says:

The small district should not expect to buy supplies as cheaply as do the larger city districts. It simply can't be done. First of all the larger districts buy large quantities. Again, the larger orders generally carry clearer specifications, because they simply can't afford to be flooded with deliveries which do not come up to the requirements and it takes too much time to correct these errors.

Sometime, legislation will be passed making county superintendents the purchasing agents for all districts with average daily attendance below some specified number. When such legislation is enacted, the smaller districts will come into their own in the matter of prices paid for supplies, for the county superintendent will then pool the supply lists of a number of small districts and thus secure the advantages of quantity purchase. Practically all supply houses will oppose such legislation, and some districts will do so, but such legislation will be based on sound business principle.²


T. V. Goodrich says, "Among the illustrations of economics lying purely in the field of business management, perhaps the most significant is related to cooperative buying." 3

James H. Risley, Superintendent of Schools, District I, Pueblo, Colorado, states,

Much money is wasted by careless buying of supplies and equipment for schools. Unscrupulous salesmen take advantage of boards of education that have no expert service in the study of prices and relative values of articles used by the schools. The buying must be concentrated in the hands of one person. He must know school supplies and equipment, and must be a judge of values and prices. Where the district is too small to have expert service in purchasing, there should be a union with other districts, or a county-wide plan developed for cooperative buying. 4

In an editorial in the American School Board Journal on "The Unit Question in School Administration", William George Bruce and William C. Bruce write as follows:

The question, as it reveals itself before legislative bodies and educational councils, touches the rural districts where the ambition has been to provide all the advantages which go with large, well-financed, well-organized, and well-manned school systems. Thus, the tendency has been to bring an entire county under one unit of school administration, and equalize the tax between the several in-


tregal parts, and at the same time centralize the government of several districts into one.

Where the county unit plan has gone into operation the district has gained more than it has lost.

The district system must give way to the county unit. This is inevitable.5

H. P. Shepherd of Knoxville, Tennesse, writes: "One of the greatest wastes lies in the purchase of supplies."3

J. S. Mullan, secretary of the Board of Education and purchasing agent at Rochester, New York, writes:

The purchase and distribution of school supplies is becoming constantly a more complex problem. The method of handling such supplies is an important rather than an incidental function of the school administration.7

Roscoe Pulliam, Superintendent of Schools at Harrisburg, Illinois, writes:

The whole school-supply business seems to be in a chaotic condition. Evidently the salesmen must do an excellent business upon an extremely large profit, or so many of them could not make a living working the same territory.8


Harry L. Buckalew of Fresno, California, gives the following criticisms and suggestions:

We who are styled educators, need to be more concerned with how we spend the public tax moneys, and the results obtained from them. This is particularly true in the purchase of instructional and janitorial supplies.

Recommendations

1. That the county unit system of school administration, or that part of it which provides for pooled buying be adopted.

2. That the legislature adopt a statute governing the purchase of school supplies which shall provide for:

A. A special purchasing agent for school supplies in the office of the county superintendent. In small counties the superintendent shall serve.

B. A final date for submitting the list of needed supplies (by principals and superintendents) annually.

C. A method of payment which would eliminate delay for the contractor.

D. Bids to be submitted and contracts to be awarded by item, not 'in Toto'.

E. Samples to be furnished on each item bid upon.

G. W. Grill, assistant superintendent of schools at Lakewood, Ohio, writes in one article:

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The point at which friction is most likely to occur between the educational and business departments of any school system is in the school supplies. It lies within the power of the purchasing department to hamper the educational program very seriously by careless purchasing methods and dilatory deliveries.

The adoption of sound business methods and a sane requisitioning and purchasing policy by the board of education should have the effect of eliminating all points of irritation.

No matter what the organization of educational forces of a school system may be, whether dual, unit, or multiple type of control, the decision as to the kind, quantity and amount of supplies, the time of their purchase and distribution should rest with the superintendent.10

Purchasing is of sufficient moment that large corporations and school systems employ a purchasing agent. They have the same opportunity to buy at list prices and on the open market as the small city school system has, but the purchasing agents know that much depends on shrewd buying and he looks for the best price. An efficient superintendent of schools who acts as a purchasing agent will save a large part of his salary to the school district through careful purchasing.

Many school men have exceedingly false notions concerning purchasing supplies and equipment. They demand articles of the cost and quality of a Packard car when something corresponding to an efficient flivver will serve their needs and will be within the ability of the school treasury.11


H. W. Anderson says: "It has been proven in many smaller cities that by the organization of a supply department the best services can be given and will show a real saving in expense."12

C. B. Wivel states: "No matter who performs the work of business routine the work is specialized. To be properly performed such work demands the services of one who has some knowledge of business routine and practices."13

George W. Grill, in another article, has stated:

One of the three main factors that determine the quality of public education is the supply service of the school. For this reason the purchasing officer, whether the superintendent, the business official, or an especially appointed purchasing agent should meet certain rather stringent qualifications as to intelligence, training and administrative ability.

The purchasing of school supplies is a job that requires intelligence, science and broad human sympathies.14

Carrol Atkinson, principal of Fermon Schools, San Luis, Obispi, California states:

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When the county superintendent buys supplies for all the rural schools in his county, not only are wasteful methods of individual purchasing eradicated, but the smaller communities are also given a service of more educational value for the dollar than ever before.\footnote{Carrol Atkinson, "The County Superintendent as a Supply Distributor," \textit{School Executives Magazine}, Vol. 50, May, 1931, pp. 413-14.}

A. K. Cline, principal of schools, Sherwood, North Dakota, states: "The authority to purchase and to have charge of the handling of school supplies should be highly centralized.\footnote{A. K. Cline, "Some General Criteria for School Supply Purchases," \textit{American School Board Journal}, Vol. 84, May, 1932, p. 28.}"

John B. Wynkoop, Bridgeport, Connecticut, states:

The purchase of school supplies is both an art and a science. It is an art in that it involves a number of intangible elements: a sense of discrimination between values as well as personalities, and a sensitivity to the ethical proprieties of business.\footnote{John B. Wynkoop, "Purchasing and Distributing School Supplies," \textit{School Executives Magazine}, Vol. 51, May, 1932, pp. 402-3.}

The foregoing are testimonies to the truth of a statement made by Benjimah J. Burris, State Superintendent of Public Instruction of Indiana in the Foreword of a bulletin published in 1924:

For deficiencies in the rural schools that are due to a lack of financial support, the cure is increased funds. But the backward condition of rural education in Indiana is plainly not wholly due to lack of financial support; it is due largely to the antiquated organization and wasteful administration; the cure for this is better organization and administration. Thoughtful students agree that the county is the most satisfactory unit for rural school organization and administration.13

C. Opinions Opposed to Centralization

The writer has found few articles favoring the smaller unit. Emmet L. Morris of Marquette, Iowa, writes:

Over the U. S. as a whole authentic figures show that the total net profit on school supplies was only .0378%.

So frequently in planning cooperative buying, the fanciful overshadows the practical in the mind of the philosopher. He forgets the clerical work, the packing, unpacking, repacking, checking, storing, adjusting, replacing, accounting, and in fact all of the mechanics of any mercantile organization involved. If the unit is a whole state, the political contingency most certain to enter is an unwarranted expense; and graft is almost sure to enter the picture on a large scale when the opportunity is so accessible. In small buying graft is impossible. The matter of individual choice of each district is normal and as it should be, but at the outset it impedes the practical operation of the theoretical plan of cooperative buying.

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Do school districts, locally supported institutions, wish to turn over all money for school supplies to a political hierarchy? Local control of schools which are supported by local tax money is the rightful privilege of American people and if they are looking into the future they will not allow themselves to be tied up by the optional plan of group purchase with an ultimate end of mandatory centralized plan of purchase of school supplies.19

Although the number of arguments seem to be largely in favor of the larger unit, few states have the county as the rural school administrative unit. John Guy Fowlkes gives the following data:

School Districts in the United States 127,000 (total approximately)

109,000 Common School Districts
6,000 Town or township
7,000 City or independent or special charter school districts
2,500 Union or consolidated districts
1,300 Separate high school districts
845 County districts for both high school and grades
130 County districts for high school only

The 109,000 common school districts do not enjoy the administration of a superintendent of schools. Only a small portion of the local school districts have a business manager. . .

School budgets in their true meaning are the financial reflections of experiences provided by schools for children.20

The persistence of so many small local districts in the face of all the reasons why they should not exist is evidence of the strength of local feeling among the people of these districts. It also bears witness to the importance of this thesis topic. One trustee in Sullivan County said that if the schools of his township had to depend on a purchasing agent located in Sullivan to furnish them with supplies they would never get anything. There is a rivalry among members of adjacent communities which strongly opposes their uniting for any purpose.

In an editorial in the Elementary School Journal the editor makes this statement: "Counties are not community units; hence they are not satisfactory units of school organization."21 Although the views of those opposed to cooperation among small school units are not given as much publicity as the views of those favoring cooperation, it is very evident from the power they manifest that there is no lack of opposition. This opposition is very evident when one talks with the various trustees. They are almost solidly opposed to formation of larger units. However, only one trustee that the writer visited refused to let him look over his invoices. Their attitude in general seemed to be that the study could reveal nothing injurious to them.

D. Procedure and Sources of Data

All the material of the first three sections has been taken from magazines, books, and bulletins in the Indiana State Teachers College Library.

The prices paid by trustees for supplies were obtained from their original invoices. In order to obtain the invoices, it was necessary to visit each trustee. This has been the most difficult part of the investigation since trustees are often busy and sometimes several trips were necessary. Then, too, the trustees were not very anxious to allow the writer to go through their invoices. There seemingly could be no good come to them from the study, and the subject sounded as if it might be injurious to them. In each case the writer explained as completely as was possible just what the topic and intentions were. Of eighteen trustees visited, all except four allowed the writer to go through their invoices. One of these four ordered the writer off his place and the other three were too busy to be bothered.

Of the fourteen townships from which information was secured, seven are in Sullivan County and have been on State Aid for the full period of the study (from 1831 to 1835); the other seven are in Benton County and have at no time received State Aid.

These cities have been used in the study:

Sullivan, including Hamilton township and having a combined population of 7,824
Lafayette, having a population of 26,240
Evansville, having a population of 108,249.

The prices paid by the townships are compared with the prices paid by each of the cities. In each case where a percent is used, it is meant to represent the saving that would have resulted to the township if it had secured the same price as the city. The writer has followed this plan all through the thesis to avoid confusion. Thus if the price paid by a township is $1.00 and that paid by a city is 70¢, the saving that would have resulted if the township had secured the city's price would have been 30 per cent. This percentage then could be multiplied by the amount spent by the townships and it would give the approximate saving that would result from cooperative buying, if a sufficient number of townships cooperated to secure the price paid by the city.

The study covers the school years 1931-32 to 1935-'36, inclusive. Complete information could not be obtained for all the units for all the years. In many cases the trustees' invoices had been misplaced, destroyed, or were in such places as not to be available, and so the data for the trustees were seldom complete. Data were secured from Sullivan and Evansville for all five years, but data were secured from Lafayette for three years only.

Just which items to include in the study was quite a problem. Few items are purchased by all the units studied. At first the writer noted all the items purchased and then
selected the items which occurred most consistently in all the units. The items included are: paper toweling, bars of toilet soap, liquid soap, roll toilet tissue, notched oval toilet tissue, erasers, pencil sharpeners, hard white blackboard crayon, sweeping compound, paste, fountain pen ink, hectograph ink, mimeograph ink, hectograph filler, good quality letter-sized stencils, white drawing paper, puritine, tablet arm chairs, construction paper, and permoplast. Countless other items are purchased but the purchases are too scattered for comparison.

In each case an attempt was made to secure the price less postage. This was not always possible, but the error introduced is small, and since the percentages cannot be expected to be too exact it may be disregarded.

In section three, part A, each item included in the study has been considered, the average price paid by the townships each year determined, and the per cent the city prices were under the townships average price determined. The writer then found the average of the averages for each of the years. This final average is assumed to be the per cent of saving that would result to the townships on the item if they could secure the price paid by the city.

Chapter III, Part B, summarized the findings of Chapter III Part A, attempting to show the per cent of saving that would result to the townships if they could secure the prices paid respectively by each of the three cities. Chapter IV presents the conclusion which the writer has drawn from the study.
CHAPTER II

REVIEW OF RELATED STUDIES

So far as the writer can discern there have been no studies similar to this conducted in the state of Indiana. This is probably due to the fact that the trustees have been under fire for some time and are not very fond of giving information that would be injurious to them.

Chester C. Drittut of the North Judson High School, North Judson, Indiana, sent a questionnaire to ninety-two county superintendents and fifty township trustees selected at random in Indiana.

The questions were:

1. Are you in favor of a county unit of schools for Indiana? Yes ___ No ___

2. Do you think the county unit would save money for the taxpayers? Yes ___ No ___

Only fifty-five of the county superintendents and twenty-six of the trustees responded. Those who failed to answer, about one-half, were undoubtedly opposed to the county unit. Some of the county superintendents said that they could not give their opinions because their position was political. Others simply stated that there were good arguments on both sides.

The county superintendents displayed more intelligence in their answers than the trustees.

The trustees were in general greatly irritated by the questionnaire.
Summary of Replies to Questionnaire:

<table>
<thead>
<tr>
<th>First Question</th>
<th>Second Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>County Trustees</td>
<td>County Trustees</td>
</tr>
<tr>
<td>Yes</td>
<td>33*</td>
</tr>
<tr>
<td>No</td>
<td>19***</td>
</tr>
<tr>
<td>Doubtful</td>
<td>3</td>
</tr>
<tr>
<td>Yes</td>
<td>16**</td>
</tr>
<tr>
<td>No</td>
<td>32</td>
</tr>
<tr>
<td>Doubtful</td>
<td>5</td>
</tr>
</tbody>
</table>

*Fourteen of the county superintendents qualified their answers with conditions.
**Four of the county superintendents qualified their answers with conditions.
***One of the county superintendents qualified his answer with conditions.

The county superintendents and trustees seem to agree that there would be no saving in the county unit over the township unit, while they disagree as to which unit would really be best. The trustees would naturally be more biased in their answers since their jobs are at stake.1

This particular study does not throw very much light on the question of the purchasing of supplies and equipment, but it does give some idea of the opposition one is bound to encounter in making a study of this kind.

Several years ago an experiment was conducted in Johnson and LaGrange Counties, Indiana, which aimed to demonstrate the value of the county over the township as a unit for various purposes.

As a part of the original plan business managers were in each of the two demonstration counties to arrange for cooperative buying of supplies, to superintend repairs, to handle text books, and to keep adequate accounts. This feature of the demonstration was almost a complete failure, since it was impossible to get the necessary cooperation from all the trustees. In Johnson County the business manager succeeded to the extent of buying coal at an appreciable saving. The first year books were sold to the children at a great saving in both counties, through the superintendents' office in LaGrange, and through the business manager in Johnson; the next year only two townships of LaGrange bought books through the superintendent; the business manager again handled them for Johnson but it was all he did.

This demonstration brings out with added force the practical impossibility to ever expect the trustees to voluntarily surrender their power over purchasing to any other officer. It also indicates that a saving would result if such were the case.

These two are the only studies that have been conducted in Indiana so far as the writer discerns that touch the subject of this thesis. They merely indicate the delicate nature of the subject and point to conclusions of some value.

Several studies of a similar nature have been made in other states. It must be kept in mind in reviewing these studies that the conditions under which they were made were different from conditions in Indiana, and so the conclusions cannot be applied directly to our state.

W. E. Sheffer, superintendent of schools of Manhattan, Kansas, relates the following study:

Just recently through the cooperation of the clerk of a rural board, I was able to compare prices paid by the rural school in small quantities for identical materials, and the prices of our board of education when buying goods on one bill costing about five hundred dollars. The contrast in price is rather enlightening. For instance, the same paper fasteners cost the rural board 75% more; thumb-tacks, 30% more; theme paper, 25% more; colored pencils, 40% more; Hectograph paper, 100% more; and carbon paper, 177% more. 

T. V. Goodrich relates the following studies:

The Modesto, California, school district pools its buying with that of the city and county and buys gasoline 6½ cents below the retail price. Fuel oil is purchased under a similar arrangement at a price of $22.50 per thousand gallons. The larger school districts in the San Louis Valley, Colorado, adopted a cooperative buying agreement in 1927. Superintendent G. P. Young, Alamosa, Colorado, one of the cooperating districts, estimates the saving to his school from this agreement at more than $2000.00. Superintendent B. L. Smith, Shelby, North Carolina, tells of reductions in expenditures in his state resulting from the establishment of a central contracting agency by the General Assembly. 'Individual schools,' he says, 'make orders direct to the contracting firms.' Many illustrations of savings from volume purchasing, competitive bidding, and buying to specification were given. Mimeograph paper was bought for 38¢ per ream that formerly cost $1.00; floor

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dressing that formerly cost $2.50 per gallon was made to specification for 45c cents per gallon; one company's bid was 25% below that of a competing company. 4

A. H. Shipley reports the following study:

In the years previous to 1927-28 the buying of school supplies had been done by each district in Fresno County, California. Beginning in 1928, a purchasing agency has been established, and all districts in the county are required to supply their schools through this purchasing department.

The plan of investigation in general was to compare the actual prices paid by each district with those paid by the purchasing agent in 1928.

There being 147 active districts in Fresno County, a group of 30 representative districts were selected throughout the county consisting of large, average, and small districts. Having thus selected a large enough sampling of the districts it was felt that the trend in costs in the entire county might be ascertained.

A list of 30 articles of standard school supplies were used in investigating the prices paid by each district. The prices were then compared to those being paid by the purchasing department to determine the influence of the creation of the central department upon prices of school supplies obtained. The invoices of materials from each of the districts, which were filed in the county office, were used in determining the prices for each of the thirty articles in each district. The average price was then compared with the 1928 prices.

The results decidedly favor the central purchasing plan for supplying school materials. A 47% saving over the individual district system has resulted. This does not state the amount saved through the purchasing agent's contract prices, which include delivery to the school, as opposed to the usual F.O.B shipping point prices, the individual schools secured. Complete data are not available for the saving on delivery charges, but a minimum of 3% is estimated by the purchasing agent.

The central purchasing plan is in no instance approached in its saving closer than 18.3% in the average price. On the other hand its saving over the individual buying is as high as 71.5%. There were only five instances of 373 studied where the districts secured prices as low as the purchasing department.

<table>
<thead>
<tr>
<th>Article</th>
<th>Per Cent Saved by the Agent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid soap</td>
<td>71.8</td>
</tr>
<tr>
<td>Floor-oil</td>
<td>70.4</td>
</tr>
<tr>
<td>Refills</td>
<td>54.3</td>
</tr>
<tr>
<td>Paper, white drawing</td>
<td>57.1</td>
</tr>
<tr>
<td>Paper, manila drawing</td>
<td>57.0</td>
</tr>
<tr>
<td>Blotters</td>
<td>55.1</td>
</tr>
<tr>
<td>Filler Paper</td>
<td>54.7</td>
</tr>
<tr>
<td>Flags</td>
<td>54.3</td>
</tr>
<tr>
<td>Toilet paper</td>
<td>27.5</td>
</tr>
<tr>
<td>Pencils 182</td>
<td>25.9</td>
</tr>
<tr>
<td>Pencils, extra good</td>
<td>17.35</td>
</tr>
</tbody>
</table>

Another study from California is reported by Harry L. Buckalew. (In California warrants are filed with the County Auditor and this facilitates study of the purchaser.) The author made a study of the purchases in Alameda County of 57,325 warrants for the school year July 1, 1922 to June 30, 1923.

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It is to be seen that the range of price on each item is very wide, even when one discounts the variations in quality. In some cases the highest price is from five to ten times the lowest price.

The average price paid was in every case lower for the cities than for the remainder of the county.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cities</th>
<th>Outside</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crayons (8 Colors), per doz. boxes</td>
<td>.573</td>
<td>.93</td>
</tr>
<tr>
<td>Paste, per quart</td>
<td>.34</td>
<td>.97</td>
</tr>
<tr>
<td>Rules, per dozen</td>
<td>.17</td>
<td>.45</td>
</tr>
<tr>
<td>Drawing paper, per ream</td>
<td>.35</td>
<td>1.25</td>
</tr>
<tr>
<td>Pens, per gross</td>
<td>.52</td>
<td>1.13</td>
</tr>
<tr>
<td>Blackboard erasers, per doz.</td>
<td>1.03</td>
<td>1.50</td>
</tr>
</tbody>
</table>

A standard brand of paper towels sold at eleven different prices, ranging from $7.00 to $14.50 per case.

A widely used brand of crayons was sold at seven different prices, from $6.30 to $11.20 a dozen boxes. (8 colors).

A nationally used trade marked kind of pen cost one district $0.85 a gross while another paid $1.50 a gross for the same pen.

One firm charged seven separate prices for a well known brand of pencils.

A widely used chalk brought six different prices, the lowest, $0.42; the highest $9.90 a box.

The remedy for the proceeding conditions seems to be in purchasing for a larger unit—the county. This actually has been done in several cases with gratifying results. Utah has been operating under the county unit for several years. Superintendent Patterson of Weber County of the state shows the following partial list of results of consolidation on prices for supplies.
Carroll Atkinson relates how county superintendent Robert L. Bird of San Luis, Ojai County, California, worked out an efficient plan:

<table>
<thead>
<tr>
<th>Item</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frasers, per gross</td>
<td>$4.50</td>
<td>$3.00</td>
</tr>
<tr>
<td>Pens, No. 553, per gross</td>
<td>.85</td>
<td>.50</td>
</tr>
<tr>
<td>Writing paper, per ream</td>
<td>6.00</td>
<td>1.60</td>
</tr>
<tr>
<td>Composition note books, per gross</td>
<td>2.90</td>
<td>3.75</td>
</tr>
<tr>
<td>Lead pencils, per gross</td>
<td>2.55</td>
<td>1.85</td>
</tr>
</tbody>
</table>

Superintendent Charles Schwaer of Calaveras County Schools, (California) persuaded all the districts of this county (there are no cities of any size) to pool their orders.

<table>
<thead>
<tr>
<th>Price per unit</th>
<th>Regular price to schools by same firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>quantity</td>
<td></td>
</tr>
<tr>
<td>34 reams Blotters</td>
<td>.50</td>
</tr>
<tr>
<td>15 doz. box Crayola, No. 8</td>
<td>.75</td>
</tr>
<tr>
<td>91 boxes Chalk Dustless</td>
<td>.60</td>
</tr>
<tr>
<td>8 doz. Penholders</td>
<td>.38</td>
</tr>
<tr>
<td>82 reams Legal cap</td>
<td>2.00</td>
</tr>
<tr>
<td>22 pts. Library paste</td>
<td>.35</td>
</tr>
<tr>
<td>84 boxes Water-color paints</td>
<td>.35</td>
</tr>
</tbody>
</table>

The orders were packed separately and shipped directly to each district ordering.

Carroll Atkinson relates how county superintendent Robert L. Bird of San Luis, Ojai County, California, worked out an efficient plan:

The county contains two cities, six towns, and eighty rural schools, 87,000 people, more than one-half in four largest communities. The city of San Luis, Ojai, as county seat and office of the county superintendent, is fairly centrally located relative to the center of population.

When Mr. Bird started this plan only 25 schools availed themselves of the service. At the end of the third year practically all schools had accepted the plan.

The following are comparative figures between prices now paid by San Luis Obispo County Schools and prices still paid by neighboring county schools where each school does its own individual buying of school supplies.

County Purchasing Plan Individual buying
(F.O.B. to San Luis Obispo) (Plus transportation)

<table>
<thead>
<tr>
<th>Item</th>
<th>County Purchasing Plan</th>
<th>Individual Buying</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scratch paper</td>
<td>4¢ per lb.</td>
<td>8-10¢ per lb.</td>
</tr>
<tr>
<td>Fool scrap 12&quot;</td>
<td>32¢ per ream</td>
<td>1.25¢ per ream</td>
</tr>
<tr>
<td>Half sheets</td>
<td>1.50¢ per ream</td>
<td>3.25¢ per ream</td>
</tr>
<tr>
<td>Athletic goods</td>
<td>45¢ off list price</td>
<td></td>
</tr>
<tr>
<td>Pencils</td>
<td>2.40¢ per gross</td>
<td>5.40¢ per gross</td>
</tr>
<tr>
<td>Ink in bottles</td>
<td>.50 per quart</td>
<td>1.25¢ per quart</td>
</tr>
<tr>
<td>Pens</td>
<td>.45 per gross</td>
<td>1.25¢ per gross</td>
</tr>
</tbody>
</table>

The plan started in 1921 and has been very successful. The only objection to it on the part of the county superintendents is that they are already overworked. 7

L. P. Young, Superintendent of Schools, Berlin, New Hampshire, makes this report:

Several meetings brought the decision to pool the yearly requisitions for supplies of the schools in North County and buy co-operatively through competitive bids.

Result: Each school profited by combined supply experience of all the superintendents: Financially there were small savings.

Very little saving may be attributed to purchasing in larger quantities. Most large school-supply houses have adopted a standard price regardless of quantity.

Some saving resulted from competitive bids.

There is considerable extra work to both buyers and sellers, but this is more than offset by the benefits derived. Each school profited by the combined experience of all the superintendents in the association. Some supplies were eliminated by further standardization of articles; the cost of other supplies was decreased by the substitution of less expensive articles, and competitive bids reduced the cost of a few items. As most of these gains could be carried over the following years without cooperative buying, it is doubtful if the net benefits would be as large a second or third year.

The instances where large savings were effected through cooperative purchasing seem to be confined to cases where a large number of small districts combined. This evidenced by the reports from California, North Carolina, and Colorado, where the counties are large and contain many districts. These conditions are much different from those existing in Indiana where counties average eleven townships per county with usually one or more independent incorporated towns or cities. The result of cooperation would be to unite much fewer units and units that are larger than the districts of the reports given in this chapter. Consequently as large a saving as one might be led to think from reading these reports is not probable.

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CHAPTER III

ANALYSIS OF DATA

A. Comparison of Prices on Items

1. Paper Toweling. The price of paper towels varies with the size, quality, and kind of towel. Folded towels are usually from fifty cents to one dollar higher per case of 5,750 towels than roll towels. Sometimes a case of towels contains fifty rolls of 150 towels each and sometimes twenty-five rolls of 150 towels each. In order to avoid confusion, the writer has used the price of a twenty-five roll case of 150 towels each.

   In 1931, five townships purchased roll toweling at $4.12\frac{1}{2},$ $3.62\frac{1}{2},$ $3.62\frac{1}{2},$ $3.75,$ and $3.00$ per case respectively, with an average price of $3.62\frac{1}{2}$ per case. Sullivan paid $2.55, 30 per cent less than the average price paid by the townships.

   In 1933 eight different purchases of roll towels were made by townships at $3.25,$ $2.30,$ $3.50,$ $2.40,$ $2.15,$ $2.05,$ $1.95$ per case with an average of $2.41$ per case. For this year Sullivan paid $1.85$ per case, 30 per cent less than the average price paid by the trustees. Lafayette, the same year, paid $1.95$ per case, 22 per cent less than the average price of the trustees.
In 1934 townships made eight purchases of roll towels at $3.50, $3.45, $3.40, $3.40, $3.35, $3.35, and $3.20 per case with an average price of $3.37 per case. Sullivan bought no roll towels this year having changed to folded towels. Lafayette paid $2.35 per case for roll towels, 22 per cent less than the average price paid by the trustees.

In 1935 seven trustees bought roll towels at $3.35, $3.25, $3.25, $3.20, $3.07, $2.95, and $2.95 per case with an average price of $3.15. Lafayette paid $2.50, 21 per cent less than the average price paid by the trustees.

Evansville bought nothing but folded towels and Sullivan bought only folded towels for the years 1934 and 1935. The writer has record of only one purchase of folded towels by the townships and this was in 1934 at $4.00 per case. Evansville that year paid $2.56 per case, 36 per cent less than the price paid by the township. Sullivan, the same year, paid $2.45 per case, 39 per cent less than the township.

Sullivan's prices for 1931, 1933, and 1934 were 30, 30, and 39 per cent less respectively than the average prices paid by the townships. The average of these is 33 per cent which is about the saving townships would make if they could purchase paper toweling at Sullivan's prices.

Lafayette's prices for 1933, 1934, and 1935 were respectively 22, 22, 21 per cent less than the average prices paid by the townships. An average of 22 per cent represents
the approximate saving townships would make if they could buy at Lafayette's prices.

Evansville's price in 1934 was 36 per cent less than the township's price on folded towels.

2. Liquid Soap. The price of liquid soap varies considerably with its concentration, the kind of fats of which it is made, and the quantity of purchase.

Four purchases of 40 per cent soap were made by townships in 1935 at $1.30, $1.30, $1.30, and $1.80 per gallon, an average of $1.27½ per gallon. Sullivan paid $1.55 per gallon, 33 per cent less than the average.

Four other townships purchased soap of unspecified concentration in 1935 at $1.70, $1.00, $.90, and $.70 per gallon. These prices possibly correspond very well with the quality of soap bought. The township which paid $1.70 per gallon in 1935 paid the same price in 1934 but only paid $1.55 per gallon in 1933, which would indicate that the $1.55 soap bought in 1933 must have been very unsatisfactory.

In 1934 eight townships paid $2.10, $1.75, $1.70, $1.50, $1.40, $1.10, $.90, and $.86 per gallon. At least five of these are either 40 or 42 per cent concentration. The prices on these are $2.10, $1.75, $1.50, $1.40, and $1.10 per gallon with an average price of $1.57 per gallon. Sullivan paid $1.00 per gallon for 40 per cent soap, 36 per cent less than the average price paid by the trustees for 40 or 42 per cent soap.
In 1933 four townships paid $.80, $.50, $.75, and $.55 per gallon for liquid soap. The only one of these purchases where the concentration was specified was the $.1.30 soap which was 42 per cent. Sullivan bought 40 per cent soap the same year at $.90 per gallon, 44 per cent less than the price paid by the township.

The same year, 1933, Evansville bought liquid soap of unspecified concentration at $.27 per gallon. In their specifications to bidders in 1933, Evansville asks for a 40 per cent soap and since liquid soap was purchased at the same price in 1932, it must have been satisfactory. This price is 77 per cent less than the average price paid by the trustees in 1933. The average price paid by the trustees for 1933 was $.1.10 per gallon.

The writer has record of only one purchase of liquid soap by a township in 1932. This was at $.95 per gallon for a soap which was purchased by Sullivan in 1931 at $.76 per gallon. This soap was evidently not very satisfactory since in each case its purchase was followed the next year by the purchase of a higher priced soap. Sullivan's price on this soap was 20 per cent lower than the price paid by the township. Evansville's price of $.27 per gallon is 72 per cent less than the township's price.

In 1931 trustees made five purchases of liquid soap at $3.25, $.1.75, $.1.45, $.1.45, and $.90 per gallon with an average
price of $1.56 per gallon. In no case was the concentration specified in the invoice, however the $2.25 soap bore the trade name "Silk Floss." Soap bearing the same name was bought by Sullivan in 1935 at $.85 per gallon and by two different townships in 1934 at $1.40 and $1.10 per gallon. In Sullivan's purchase it was specified as 40 per cent soap. The difference in prices was possibly due to the soap being new on the market in 1931. In 1931 Sullivan paid $.75 per gallon for soap of unspecified concentration, and Evansville paid $.05 per pound about 40 cents per gallon. A comparison of these prices would hardly be fair, since the soaps are all different, but Sullivan's and Evansville's prices are much lower than the trustees prices, and it is safe to assume that these cities would not purchase quantities of soaps of inferior quality. Sullivan's price is 51 per cent under the average price paid by the trustees. Evansville's price is 74 per cent under the average price paid by the trustees.

To say just how much the townships would save if they could purchase liquid soap at the price paid by Sullivan is impossible. Sullivan's price for the years 1935, 1934, and 1933 on 40 per cent soap were respectively 33, 35, and 44 per cent less than the average prices paid by the townships for soap of that concentration and 51 per cent under the average price paid by the townships in 1931. The average of these is 41 per cent which is about the saving townships
would make if they could purchase liquid soap at Sullivan's price.

Evansville's prices for the years 1931, 1932, and 1933 were respectively 74, 72, and 77 per cent less than the average prices paid by the trustees for these years. The average of these is 75 per cent which is about the amount townships would save if they could buy liquid soap at Evansville's prices.

The most conspicuous thing about the townships' prices on liquid soap is their great variance. There seems to be considerable speculation by the trustees in trying to find the best soap to buy.

3. **Bar Toilet Soap.** Only one township purchased bar toilet soap during the period covered by this study. That was a purchase of 100 bars in 1935 for $5.00. Lafayette, the same year, paid $3.52 per hundred bars, 29 per cent less than the township's price; and Evansville paid $3.14 per hundred bars, 39 per cent less than the township's price. The kind of soap was not given in any case.

4. **Notched Oval Toilet Tissue.** Of all the units studied only Evansville and one township used notched oval toilet tissue. In 1933 the township bought from two different firms paying $4.70 and $3.70 per case an average of $4.20. Evansville paid $2.45 per case, 42 per cent less than the average of the township's two prices.
In 1934 the township paid $5.95 per case; Evansville paid $2.98 per case, 50 per cent less than the township's price.

In 1935 the township paid $4.37\frac{1}{2} and $3.80 per case, an average of $4.08 \frac{3}{4} per case. Evansville paid $2.37 per case, 42 per cent less than the average price paid by the township.

For these three years, Evansville's prices are 42, 50, and 42 per cent less than the averages for the township.

The saving on this kind of toilet paper if the townships should purchase it would be about 45 per cent, the average of the per cents of Evansville's prices under the averages of the township.

5. **Roll Toilet Tissue.** All other units use roll toilet tissue. The writer has used the prices of cartons of fifty rolls of paper, 2000 sheets to the roll in making the following comparisons.

In 1931 two townships paid $5.87\frac{1}{2} each per case. Sullivan paid $4.00, 32 per cent less than the townships paid.

The writer has no record of purchases by any trustee for 1932.

In 1933 three trustees paid $4.50, $3.75, and $3.40 per case, an average of $3.88 per case. Lafayette paid $3.07, 21 per cent less than the average price paid by the townships.
The writer was unable to find any record of toilet paper purchased by Sullivan in 1833.

In 1834 six purchases were made by trustees at $5.32\frac{1}{2}$, $5.25$, $5.00$, $5.65$, and $4.37\frac{1}{2}$ per case with an average price of $4.37$. Sullivan's price was $2.80$ per case, or 44 per cent less than the average price paid by the trustees.

Lafayette's price for 1834 was $3.75$ per case, 25 per cent lower than the average price paid by the townships.

In 1835 six purchases of roll toilet paper were made by townships at $5.25$, $5.10$, $5.00$, $4.50$, $4.50$, and $4.50$ per case with an average price of $4.91$ per case. Sullivan paid $5.10$ per case, 32 per cent less than the average price paid by the trustees.

Lafayette paid $3.25$ per case or 32 per cent less than the average price paid by the trustees.

During the years 1831, 1834, and 1835, Sullivan's prices on roll toilet tissue were respectively 32, 41, and 31 per cent less than the average prices paid by the townships. This would indicate a saving of about 33 per cent to the townships on toilet tissue if they could purchase at Sullivan's prices.

During the years 1833, 1834, and 1835, Lafayette's prices on toilet tissue were respectively 21, 25, and 32 per cent less than the average prices paid by the townships. This would indicate a saving of about 26 per cent of what they pay for toilet tissue if the townships could buy at Lafayette's price.
6. **Blackboard Erasers.** A comparison of values in purchases of erasers is very difficult, since there are so many different priced erasers on the market. But, since they all serve the same purpose, a comparison of the average prices paid by trustees with the prices paid by the cities should give a reasonably clear idea of the saving that would result if the townships purchased the erasers which are purchased by the cities and were able to secure the same prices.

In 1931 two townships purchased erasers at $2.20 and $1.95 per dozen making an average price of $2.07$ per dozen. Sullivan paid $1.35 per dozen, 35 per cent less than the average price paid by the trustees. Evansville paid $1.28, 38 per cent less than the average price paid by the trustees.

In 1932 three townships paid $1.60, $1.65, and $1.60 per dozen for erasers, an average of $1.71\ 2/3$ per dozen. Sullivan paid $1.25 per dozen, 28 per cent less than the average price of the trustees. Evansville paid $1.11 per dozen; 41 per cent less than the average of the townships.

In 1933 two townships paid $1.60 and $1.25 per dozen for erasers, an average of $1.42\ 1/2$ per dozen. Sullivan paid $1.40 per dozen, not quite 2 per cent less than the average of the trustees. Lafayette paid $.95 per dozen, 33 per cent less than the average price paid by the trustees. Evansville paid $.88, 38 per cent less than the average price paid by the trustees.
In 1934 ten townships purchased erasers at $2.60, $2.50, $2.25, $2.25, $1.90, $1.85, $1.80, and $1.66 2/3 per dozen, the average price being $2.06 2/3 per dozen. Sullivan paid $1.50, a price less than any of the townships' prices and 28 per cent less than their average price. Lafayette paid $1.86, about the same as the lowest price paid by the townships and 20 per cent less than their average price. Evansville paid $1.60 per dozen, slightly more than the lowest price paid by the townships and 18 per cent less than their average price.

In 1935 two townships purchased erasers at $1.80 and $2.00 per dozen, an average of $1.90. Sullivan paid $1.90 per dozen, the same as the lowest price paid by the townships and 3 per cent less than their average price. Lafayette paid $1.80 per dozen, 15 per cent less than the average price paid by the townships. No record was obtained for Evansville's price for erasers for 1935.

The per cent of Sullivan's prices below the average prices of the trustees for the five years studied were: 35, 28, 2, 28, and 3, an average of 19 per cent.

The average prices paid by Lafayette for the years 1933, 1934, and 1935 were 33, 20, and 15 per cent, an average of 23 per cent less than the average prices for these three years paid by the townships.

The prices paid by Evansville for the years 1931, 1932, 1933, and 1934 were 38, 41, 38, and 18 per cent, an average
of 34 per cent less than the average prices of the townships.

7. Pencil Sharpeners. There is quite a bit of difference in the prices of different kinds of pencil sharpeners. The specifications which Evansville submits to bidders require giant size, self feeder type, Premier, Boston #4 or equal. Few townships buy pencil sharpeners of this size and quality.

In 1934 one township purchased Premier pencil sharpeners for $2.50 each. Evansville paid $1.34 each the same year, 46 per cent less than the township's price.

In 1935, one township paid $1.75 each for Premier pencil sharpeners. Evansville paid $1.30 each, 26 per cent less than the township's price. The average of the two per cents is 36 which is as near the saving as could be determined which the trustees would make on pencil sharpeners if they could buy them at Evansville's price.

In 1934 giant pencil sharpeners were purchased by one township at $1.50 each. Lafayette paid $1.37 each, 7 per cent less. The same year Boston pencil sharpeners were purchased by one township at $.95 each while Lafayette paid $.93 each, 2 per cent less. These are the only instances where Lafayette and any townships purchased the same pencil sharpeners. The average saving to the townships could they have purchased at Lafayette's prices would have been about 5 per cent.
Practically all of the townships and the city of Sullivan buy Chicago pencil sharpeners. In 1931 two townships purchased Chicago pencil sharpeners at $.65 and $.80 each, an average of $.62 each. Sullivan paid $.75 each, 19 per cent less than the average price paid by the townships. Sullivan bought no pencil sharpeners in 1932 and one township paid $.80 each for Chicago pencil sharpeners.

In 1933 three townships bought Chicago pencil sharpeners each paying $.80. Sullivan paid $.65 each, 28 per cent less than the price paid by the townships.

In 1934 four townships bought Chicago pencil sharpeners, two paying $1.00 each and two paying $.80 each, an average price of $.95. Sullivan paid $.80 each, 13 per cent less than the average price paid by the townships.

In 1935 three townships paid $.85, $.85, and $.60 each for Chicago pencil sharpeners an average price of $.95 1/3 each. Sullivan paid $.75 each, about 20 per cent less than the average price paid by the townships.

Sullivan's prices for the four years were 18, 28, 18, and 20 per cent below the average prices paid by the townships. The average of these is 21 per cent, which is about the per cent of saving the townships would make if they could purchase Chicago pencil sharpeners at Sullivan's prices.

8. Hard White Blackboard Crayon. The thing that stands out most with respect to blackboard crayon is the uniformity
of price paid by all units except Evansville and Lafayette. This is possibly due to the small amounts purchased. No unit studied except Evansville, which uses about sixteen cases per year, and Lafayette, which uses about six cases per year, buys more than one case per year. A case consists of twenty-five boxes of 144 sticks each.

In 1931 two townships bought hard crayon at $12.50 and $12.00 per case, an average price of $12.25 per case. Sullivan paid $12.00 per case, 2 per cent less than the average for the townships. Evansville paid $12.75 per case, 23 per cent less than the average price paid by the townships.

In 1932 one township paid $12.00 per case. Sullivan paid $12.50 per case or four per cent more than the township paid. Evansville paid $9.00 per case, 25 per cent less than the township.

In 1933 four townships paid $12.75, $12.75, $12.50, and $12.00 per case, an average price of $12.50 per case. Evansville paid $6.25 per case, 50 per cent less than the average price paid by the townships. Neither Sullivan nor Lafayette bought hard crayon in 1933.

In 1934 seven townships paid respectively $14.00, $14.00, $13.75, $13.75, $13.30, $12.50, and $12.00 per case, an average price of $13.38 per case. Sullivan paid $14.00 per case, 5 per cent more than the average price paid by the townships. Lafayette paid $10.63 per case or 20 per cent less than the
average price paid by the townships. Evansville paid $8.00 per case or 40 per cent less than the average price paid by the townships.

In 1931 Sullivan's price was 2 per cent less than the average of the townships' prices, and in 1932, and 1933 their prices were 4 and 5 per cent higher. The trustees would pay about 2 per cent more for chalk if they purchased at Sullivan's prices judging from this information.

In 1934 Lafayette's price was 20 per cent less than the average of the townships' prices.

Evansville's prices for the years 1931, 1932, 1933, and 1934 were respectively 28, 25, 50, and 40 per cent less than the averages of the townships. The average of these per cents is 38 which is about the saving that townships would make if they purchased at the same price that Evansville paid.

9. Sweeping Compound. For sweeping compound the prices seem to be in accordance with the size of the purchasing unit. Lafayette each year secured the lowest price with Sullivan next and the townships all about the same but considerably higher. Evansville did not have sweeping compound listed, and if they purchased any it must have been under some other name.

In 1931 one township paid at the rate of $8.25 per barrel of 300 pounds. Sullivan paid $6.00 for the same sized barrel, 27 per cent less than the township's price.
In 1934 two townships paid $8.25 and $8.00 per barrel for sweeping compound having an average price of $8.12\frac{1}{2} per barrel. Lafayette paid $4.90 per barrel, 40 per cent less than the townships' average price. In 1935 two townships paid $7.50 and $7.20 per barrel with an average price of $7.35 per barrel. Sullivan again paid $6.00 per barrel or 18 per cent less than the average price paid by the two townships. Lafayette paid $4.90 per barrel, 33 per cent less than the average price paid by the two townships.

Sullivan's prices for 1931 and 1935 were respectively 18 and 27 less than the averages paid by the townships. The average of these is 23 per cent which is about the per cent townships would save on sweeping compound if they could purchase at Sullivan's prices.

Lafayette's prices for 1934 and 1935 were respectively 40, and 33 per cent less than the average price paid by the townships. The average of these two is 37 per cent which is about the saving that the townships would have made if they had purchased sweeping compound at Lafayette's prices.

(Each year Lafayette bought ten or twelve barrels of sweeping compound while none of the other units bought over one barrel at a time.)

10. Paste. In this comparison the writer has used the prices on Crescent, Cresco, Firma-grip, Gluey, Stixit, or pastes of about the same quality.
In 1931 two townships paid $0.50 and $0.45 5/8 per quart with an average of $0.47 1/12 per quart. Evansville paid $0.33 per quart with a 30 per cent saving over the average of the townships' prices.

In 1932 one township paid $0.50 per quart, and Evansville paid $0.32 per quart, 36 per cent less.

In 1933 three townships paid $0.60, $0.53 1/3, and $0.50 per quart, an average price of $0.55 1/3 per quart. Evansville paid $0.32 per quart, 51 per cent less than the average price of the townships. Lafayette paid $0.30 per quart, or 55 per cent less than the average price paid by the townships.

In 1934 three townships paid $0.60, $0.50, and $0.50 per quart with an average price of $0.53 1/3 per quart. Evansville paid $0.22 per quart, or 59 per cent less than the average price paid by the townships. Lafayette paid $0.27 per quart or 49 per cent less than the average price paid by the townships.

In 1934 one township paid $1.50 per gallon for paste. Sullivan paid $0.85 and $0.81 2/3 per gallon, an average price of $0.88 1/3 per gallon. Sullivan's average price was 41 per cent lower than the townships' price. These were the only cases of purchases of gallon jars of paste except Sullivan in 1935 when they paid $0.75 per gallon.

In 1935 seven townships bought paste each paying the same price—$0.50 per quart. Evansville this year paid $0.22
per quart or 56 per cent less than the price paid by the townships. Lafayette paid $.25 per quart, 50 per cent less than the price paid by the townships.

Sullivan's average price in 1934 was 41 per cent less than the price paid by a township for paste. The per cent is approximately what the townships would save if they could purchase paste at Sullivan's prices.

Lafayette's prices for 1933, 1934, and 1935 were 55, 48, and 50 per cent respectively less than the average prices paid by the townships. The average of these is 52 per cent which is about the saving townships would make on paste if they purchased at Lafayette's prices.

Evansville's prices for 1931, 1932, 1933, 1934, and 1935 were 30, 36, 51, 59, and 56 per cent less than the average prices paid by the townships, an average of 43 per cent which is approximately the saving townships would make on paste if they could purchase at Evansville's prices.

11. Fountain Pen Ink. Fountain pen ink was purchased by two townships in 1935 at $1.50 and $1.25 per quart, an average price of $1.30 per quart. Sullivan paid $1.75 per quart or 48 per cent less than the average price paid by the two townships. Evansville paid $.36 per quart or 53 per cent less than the average price paid by the townships. The writer has no record of fountain pen ink being purchased by any township for any other year.
13. **Hectograph Ink.** Five townships that purchased hectograph ink during the period of this study paid 35 cents per bottle. Sullivan paid the same price, indicating that no saving would result to the townships if they purchased hectograph ink at Sullivan's prices. Evansville paid 36 cents per bottle in 1935 or 34 per cent less than the townships paid.

14. **Mimeograph Ink.** Mimeograph ink of good quality was purchased by five townships during the period of this study at $2.00 per pound. This is the price paid by Sullivan, indicating that no saving would result to the townships buying mimeograph ink at Sullivan's prices.

14. **Hectograph Filler.** Hectograph filler was bought by four townships in 1932 at $.80, $.75, and $.42 per pound, an average of $.62 per pound. Sullivan paid $.37 and $.50 per pound with an average price of $.43 per pound. Sullivan's average price was 30 per cent less than the average price paid by the townships.

In 1933 two townships paid $.75 and $.50 per pound for hectograph filler with an average price of $.62. Sullivan paid $.37 per pound, 41 per cent less than the average of the townships' prices.

In 1934 three townships paid $.64, $.60, and $.56 per pound for hectograph filler, an average price of $.60 per pound. Sullivan paid $.35 per pound, 42 per cent less than the average price paid by the townships.
In 1935 two townships paid 6.60 and 5.52 per pound, an average price of 6.58 per pound. Sullivan paid 6.90 and 5.58, an average price of 6.74 per pound. Sullivan's average price was 32 per cent more than the average price paid by the townships. This condition is difficult to explain. However Sullivan's hectograph filler in both cases was purchased from a local drug store whereas in the previous years, it was purchased from school supply houses.

During the years 1932, 1933, and 1934 Sullivan's prices were 30, 41, and 42 per cent lower than the average price paid by the townships, and in 1935 their price was 32 per cent higher than the townships' average price. The average of these per cents is 30 per cent in favor of Sullivan.

15. Good Quality Letter Sized Stencils. Good quality letter sized stencils were purchased in 1931 by four townships at $3.50, $3.25, $3.25, and $2.75 per quire, an average price of $3.16 per quire. Sullivan paid $2.75 per quire, 13 per cent less than the townships' average price.

In 1932 one township paid $2.75 per quire and Sullivan paid $3.00 per quire or 9 per cent more than the township paid.

In 1933 three townships paid $3.25, $3.25, and $3.00 per quire with an average price of $3.16 2/3 per quire. Sullivan paid $2.80 per quire, 11 per cent less than the average price of the townships.
In 1934 five townships paid $3.25 per quire, and Sullivan paid exactly the same.

In 1935 two townships paid $3.25 per quire, and Sullivan paid $2.80 per quire, 11 per cent less than the price paid by the townships.

Sullivan's prices for the five years were 19, -8, 11, 0, and 11 per cent less than the average prices of the townships. The average of these is 5 per cent which is about the saving townships would make if they purchased stencils at Sullivan's prices.

13. White Drawing Paper. Four purchases of white drawing paper were made by townships in 1931 at $.135, $.120, $.130, and $.100 per ream, an average of $.116 per ream. Sullivan paid $.125 per ream, 8 per cent more than the average of the townships' prices. Evansville paid $.58 per ream or 50 per cent less than the average of the townships' prices.

In 1932 one township paid $.110 per ream; Evansville paid $.52 per ream, 53 per cent less than the township's price.

In 1933 one township paid $.110 per ream and Evansville paid $.51 per ream, 54 per cent less than the township paid.

Sullivan's one price was 8 per cent more than the average price of the townships for the same year.

Evansville's prices for the three years were 50, 53, and 54 per cent less than the townships' averages for the
same years. This would mean a saving to the townships of about 52 per cent if they could purchase white drawing paper at Evansville’s prices.

17. Puritine. In 1933 one township bought puritine at $32.50 per barrel of 325 pounds. Lafayette paid $24.01 for the same amount, 25 per cent less than the township’s price.

In 1935 the same township paid $26.00 per barrel; Lafayette paid $19.18 per barrel, 23 per cent less than the township paid.

The townships would save about 25 per cent on puritine if they could purchase it at Lafayette’s price.

18. Tablet Arm Chairs. Tablet arm chairs made of oak except the arms which were of maple were purchased by one township in 1933 at $4.00 each. Evansville paid $2.24 each or 44 per cent less than the township’s price for chairs of the same specifications.

In 1935 two townships paid $3.25 and $6.00 each for similar chairs, an average price of $5.13. Evansville paid $3.44 each, 33 per cent less than the average price paid by the townships.

Evansville’s prices for the two years were 33 and 44 per cent less than the townships’ prices, an average of 38 per cent. This is about what the trustees would save on tablet arm chairs if they should purchase them at Evansville’s prices.
19. **Construction Paper.** Packages of construction paper 9 x 12 inches and containing 100 sheets were purchased by one township in 1931 at $.50 per package. Evansville paid $.18 per package, 64 per cent less than the township paid.

In 1935 one township paid $.50 and four paid $.40 per package making an average of $.42 per package. Evansville paid $.18$\frac{1}{2}$ per package, 53 per cent less than the average price paid by the townships.

For these two years Evansville's prices were 31 and 56 per cent respectively less than the average prices paid by the townships. The average of these is 60 per cent which is about the saving townships would make on construction paper if they could secure it at Evansville's prices.

20. **Permo plast.** Two purchases of permo plast were made by townships in 1931 at $.25 and $.20 per pound, an average price of $.24 per pound. Evansville, the same year, paid $.18$\frac{1}{2}$ per pound or 36 per cent less than the average of the townships' prices.

In 1935 one township paid $.20 per pound; and Evansville paid $.11 per pound or 45 per cent less than the township paid.

Evansville's prices were 36 and 45 per cent less than the townships' average prices, an average of 40 per cent, which is about what the townships would save if they could purchase permo plast at Evansville's prices.
B. Comparison of Townships' Prices With City Prices

1. With Sullivan's Prices. Table I gives the percentages that Sullivan prices are under the average prices of the townships as determined in Section A. These percentages represent approximately the saving the townships would make if they could purchase school supplies at the prices Sullivan pays for them.

<table>
<thead>
<tr>
<th>Article</th>
<th>Per Cent of Saving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fountain pen ink</td>
<td>46</td>
</tr>
<tr>
<td>Liquid soap</td>
<td>41</td>
</tr>
<tr>
<td>Paste</td>
<td>41</td>
</tr>
<tr>
<td>Roll toilet paper</td>
<td>33</td>
</tr>
<tr>
<td>Paper toweling</td>
<td>33</td>
</tr>
<tr>
<td>Sweeping compound</td>
<td>23</td>
</tr>
<tr>
<td>Pencil sharpeners</td>
<td>21</td>
</tr>
<tr>
<td>Hectograph filler</td>
<td>20</td>
</tr>
<tr>
<td>Blackboard erasers</td>
<td>19</td>
</tr>
<tr>
<td>Stencils</td>
<td>5</td>
</tr>
<tr>
<td>Hectograph ink</td>
<td>0</td>
</tr>
<tr>
<td>Mimeograph ink</td>
<td>0</td>
</tr>
<tr>
<td>Blackboard crayon</td>
<td>-2</td>
</tr>
<tr>
<td>White drawing paper</td>
<td>-8</td>
</tr>
</tbody>
</table>

The average of these is 20 per cent. Just how near this is to the actual percentage of saving townships would
make if they could purchase at Sullivan's prices might be a subject of considerable speculation. According to their statistical report for the years of the study Sullivan spends about $1,000.00 per year for janitorial and instructional supplies. About one fourth of this is spent for paper towel ing, liquid soap, toilet paper, and paste. The remainder is spent for a great variety of items, seldom more than $10.00 on each. The saving on these four biggest items of purchase would be 33, 41, 33, and 41 per cent, respectively. Of these four the distribution of cost is about $170.00 for toweling, $35.00 for liquid soap, $35.00 for toilet paper, and $10.00 for paste. These amounts are based on the year 1935, when Sullivan spent $137.40 for toweling, $42.50 for liquid soap, $31.00 for toilet paper, and $9.00 for paste. The townships making these same purchases would have paid about $250.00 for toweling, $73.00 for liquid soap, $49.00 for toilet paper, and $15.00 for paste. This would mean that the townships would have paid $84.00 more for the toweling, $26.00 more for the soap, $17.00 more for the toilet paper, and $6.00 more for paste than Sullivan paid. This would be $136.00 more for these four items than Sullivan paid. The total amount the townships would spend for these items is $386.00 as compared with Sullivan's $250.00. This would mean an actual saving on these four most important items of a little over 35 per cent. Excluding these four items from the list, the
average saving on the other items in the table is 18 per cent. Assuming this to be the correct per cent of saving on all other items purchased, there would be an additional saving on these items of about $102.00, since Sullivan spends about $750.00 for them. Added to the $138.00 more they would pay for the first four items considered, this would make a total of $238.00 the townships would pay more than Sullivan pays for $1,000.00 worth of supplies. This would indicate a saving of 238/1238 or slightly more than 19 per cent which is about as accurate an estimate as can be made from these data. This agrees very well with the average of the per cents in the table which is 18 9/14 per cent.

This indicates that if townships would cooperate forming units as large as the city of Sullivan and Hamilton Township combined, which have a population of about 7,800 and a school enrollment of 2,000 including grades 1-12, there would be a saving on instructional and janitorial supplies of about 18 per cent. Benton County has a population of about 11,800 and a school enrollment of about 2,800. According to the county superintendent's statistical report, the townships of Benton County spent about $12,000.00 in 1931, $8,000.00 in 1932, $7,000.00 in 1933, $11,000.00 in 1934, and over $7,000.00 in 1935 for instructional and janitorial supplies. This gives an average of $8,000.00 per year. If all these supplies could be purchased at Sullivan's prices the average saving would be around $1,700.00 each year.
Sullivan County, excluding the city of Sullivan and Hamilton Township, has a population of about 20,300 and a school enrollment of about 5,200. According to the county superintendent's statistical report the trustees outside of Sullivan and Hamilton Township spent about $3,300.00 in 1931, $4,400.00 in 1932, $3,800.00 in 1933, $2,300.00 in 1934, and $2,400.00 in 1935, an average of $3,300.00 for instructional and janitorial supplies. These amounts are small due to lack of funds and state aid restrictions. In most cases the schools do not have sufficient supplies to operate efficiently. If these townships could purchase as cheaply as Sullivan, they would save on an average about $527.00 per year.

2. With Lafayette's Prices. Table II gives the per cent of saving townships would make if they could purchase at Lafayette's prices as determined in Section A.

TABLE II

PER CENT OF TOWNSHIPS' SAVINGS IF PURCHASES WERE MADE AT LAFAYETTE'S PRICES

<table>
<thead>
<tr>
<th>Article</th>
<th>Per Cent Townships Would Save</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paste</td>
<td>52</td>
</tr>
<tr>
<td>Sweeping compound</td>
<td>37</td>
</tr>
<tr>
<td>Bars of toilet soap</td>
<td>29</td>
</tr>
<tr>
<td>Roll toilet paper</td>
<td>28</td>
</tr>
<tr>
<td>Puritine</td>
<td>25</td>
</tr>
<tr>
<td>Blackboard erasers</td>
<td>23</td>
</tr>
<tr>
<td>Paper towels</td>
<td>22</td>
</tr>
<tr>
<td>Blackboard crayon</td>
<td>20</td>
</tr>
<tr>
<td>Pencil sharpeners</td>
<td>5</td>
</tr>
</tbody>
</table>
For each of the three years for which the writer was able to secure data from Lafayette, sixteen items were purchased by bids, the remainder being purchased as needed. All supplies are purchased from local dealers which explains why in several cases Sullivan secured lower prices.

The articles not listed in Table II which Lafayette bought by bids are mop heads, sewed sponges, chamois skins, mop handles, coco brush mats, mopping powder, and ink powder. These articles were either not purchased by townships or there is such a variety and so few purchases by the townships that comparison of prices would not be justified. The writer was unable to secure the prices on articles not purchased by bids so the list is small.

Table III gives the average amounts spent for the items of the previous table (Table II) by Lafayette, the approximate amounts townships would pay for the same quantity if they purchase at their present rates, and the saving they would make if they were able to purchase at Lafayette's prices.

Lafayette spends about $2,010.00 per year for instructional and janitorial supplies. The remaining items purchased by bids amount to about $200.00 per year. The per cent of saving the townships would make on the above nine items is 25. If this would hold for the other $200.00 worth bought by bids, it would mean an additional saving of $37.00 to the townships to purchase them at Lafayette's prices. This
TABLE III

COMPARISON OF AMOUNTS TOWNSHIPS WOULD PAY IF SAME QUANTITIES WERE PURCHASED AS PURCHASED BY LAFAYETTE AND SAVINGS POSSIBLE IF THEY COULD SECURE LAFAYETTE'S PRICES

<table>
<thead>
<tr>
<th>Article</th>
<th>Amt. Paid By Lafayette</th>
<th>Amt. Townships Would Pay For Same Quantity</th>
<th>Possible Saving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roll toweling</td>
<td>$535.00</td>
<td>$700.00</td>
<td>$166.00</td>
</tr>
<tr>
<td>Puritine</td>
<td>109.00</td>
<td>145.00</td>
<td>36.00</td>
</tr>
<tr>
<td>Blackboard crayon</td>
<td>61.00</td>
<td>76.00</td>
<td>15.00</td>
</tr>
<tr>
<td>Toilet paper</td>
<td>55.00</td>
<td>74.00</td>
<td>19.00</td>
</tr>
<tr>
<td>Sweeping compound</td>
<td>46.00</td>
<td>75.00</td>
<td>29.00</td>
</tr>
<tr>
<td>Pencil sharpeners</td>
<td>40.00</td>
<td>42.00</td>
<td>2.00</td>
</tr>
<tr>
<td>Toilet soap</td>
<td>30.00</td>
<td>42.00</td>
<td>12.00</td>
</tr>
<tr>
<td>Paste</td>
<td>18.00</td>
<td>38.00</td>
<td>20.00</td>
</tr>
<tr>
<td>Blackboard erasers</td>
<td>17.00</td>
<td>22.00</td>
<td>5.00</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>$910.00</strong></td>
<td><strong>$1214.00</strong></td>
<td><strong>$304.00</strong></td>
</tr>
</tbody>
</table>
would make a total saving on all items purchased by bids of $371.00.

The saving on items not purchased by bids can not be stated with any degree of accuracy. For Sullivan it was about 12 per cent. Since Lafayette buys everything locally, it would possibly pay more than Sullivan as is evidenced in several cases on items purchased by bids, and the saving would not be more than 10 per cent on about $6,900.00 worth of supplies or a saving of $787.00. This would make a total saving of about $1,138.00 to the townships if they purchased the same supplies at Lafayette's prices. The amount the townships would pay, if they should purchase the same supplies that Lafayette pays $8,010.00 per year for, would be about $9,040.00. From this line of thinking, their saving, if they could purchase at Lafayette's prices, would be close to 12 per cent. Disregarding the per cent of saving on articles not bought by bids, the saving would be $371.00 on $8,372.00 worth of supplies, or about 4 per cent.

In Benton County the school enrollment and population are only a fractional part of the school enrollment and population of Lafayette, but the amount spent for instructional and janitorial supplies is greater, averaging $8,000.00 per year as compared with Lafayette's average of $8,010.00. The saving to Benton County, if all instructional and janitorial supplies could be purchased at Lafayette's prices, would be between $360.00 and $1,060.00.
This indicates that if townships were combined into units using as many supplies as Lafayette, which has a population of about 28,000 and a school enrollment of about 4,800, and purchasing were done in the same manner, a saving as indicated above would result. The townships of Sullivan County, excluding the city of Sullivan and Hamilton Township, have a smaller population than Lafayette but a slightly larger school enrollment. However they spent, according to the superintendent's statistical report, only $5,300.00 on an average for the years covered in this study. If they should purchase at Lafayette's prices, an average saving of between $132.00 and $396.00 would result. Since in these poverty stricken townships all supplies not absolutely needed are not purchased, and since there are more students than in the schools of Lafayette, it is highly probable that the amounts of the necessary articles of supplies purchased are equal to or greater than the amounts purchased by Lafayette so that the saving would be not less than $300.00 per year.

3. With Evansville's Prices. Table IV gives the percent of saving townships would make on the items purchased if they could purchase at Evansville's prices.

Evansville's prices were taken from the School Board's Record Book and the quantities purchased were not given so that the amounts spent for each item cannot be determined.

In Evansville practically all supplies are purchased by bids while in the townships practically no items are purchased
TABLE IV

PER CENT OF EVANSVILLE'S PRICES UNDER THE AVERAGE OF THE TOWNSHIPS' PRICES

<table>
<thead>
<tr>
<th>Article</th>
<th>Per Cent of Evansville's Price Under Township's Average Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid soap</td>
<td>75</td>
</tr>
<tr>
<td>Hectograph ink</td>
<td>64</td>
</tr>
<tr>
<td>Construction paper</td>
<td>60</td>
</tr>
<tr>
<td>Fountain pen ink</td>
<td>53</td>
</tr>
<tr>
<td>White drawing paper</td>
<td>52</td>
</tr>
<tr>
<td>Paste</td>
<td>46</td>
</tr>
<tr>
<td>Toilet tissue</td>
<td>45</td>
</tr>
<tr>
<td>Permoplast</td>
<td>40</td>
</tr>
<tr>
<td>Bar toilet soap</td>
<td>39</td>
</tr>
<tr>
<td>Tablet arm chairs</td>
<td>38</td>
</tr>
<tr>
<td>Paper towels</td>
<td>36</td>
</tr>
<tr>
<td>Pencil sharpeners</td>
<td>36</td>
</tr>
<tr>
<td>Blackboard crayon</td>
<td>36</td>
</tr>
<tr>
<td>Blackboard erasers</td>
<td>34</td>
</tr>
</tbody>
</table>
by bids. This comparison contrasts the two extremes, a large unit where practically all items are purchased through bids and small units where no purchases are made through bids.

The average percentage of saving determined by adding the percentages in Table IV and dividing by the number of items considered is 47. This is about all that can be done under the conditions and since the methods of purchasing for all items are the same, the percentage of saving would be reasonably uniform.

Evansville has a population of about 103,000, an average school enrollment of about 14,500 and spends an average of about $31,400.00 each year for instructional and janitorial supplies. The townships of Sullivan County, excluding the city of Sullivan and Hamilton Township, have a population of about 20,300, less than 1/5 the population of Evansville; they spend an average of only around $3,300.00 each year for instructional and janitorial supplies, a little over 1/10 the amount spent by the city of Evansville.

The saving to Sullivan County, if the townships were organized with townships of other counties into a unit comparable to Evansville and a supply purchasing agency as efficient as Evansville's were organized, would be under the present conditions about $1,550.00 each year. The saving to Benton County under the same conditions would be about $4,330.00 each year.
CHAPTER IV

CONCLUSIONS

1. From the data of this study it is evident that if townships were organized into units so that the school enrollment was about 2,000—approximately Sullivan's enrollment—and if supplies were purchased in the manner by which they are purchased in Sullivan, where the city superintendent buys what supplies he thinks best through bids and the rest from supply houses as needed, a saving of about 15 per cent of the present amount spent for supplies would result. (Chapter III, pages 47-50.)

2. From the data of this study it is evident that if townships were organized into units having a total school enrollment of about 4,500 and supplies were bought by the method employed by Lafayette—supplies bought only from local dealers, a few of the most important by bids, and the rest as needed—a saving of about 25 per cent would result on the articles purchased by bids. The writer has not been able to determine the saving, if any, that would result on supplies not purchased by bids, but it would probably not be more than 10 per cent, judging by Sullivan's prices. If the portion of supplies purchased by bids were the same for the townships as they are for Lafayette, the saving
on the total amount spent by the trustees under present conditions would be about 18 per cent. (Chapter III, pages 50-54.)

3. From the data of this study it is evident that if the townships were organized into units having a school population as large as that of Evansville, about 14,500, and if as efficient a system of purchasing were developed, the townships would save about 47 per cent of what they spend for supplies at the present time. (Chapter III, pages 54-57.)

These percentages do not take into consideration the relative expenses involved in operating the various units. This is a matter which is beyond the scope of this thesis but would have to be taken into consideration before the actual saving to result from organizing the townships into the different sized units could be determined.

There very obviously would be a saving if the townships should purchase cooperatively. The amount of saving would depend upon the size of the unit, the skill of the purchasing department, and the method of purchasing.
BIBLIOGRAPHY


