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The Equity of School Facilities Funding: Examples from Kentucky

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Abstract

While there is an extensive literature analyzing the relative equity of state funding systems for current operating revenues, there is a dearth of research on capital funding systems. This article presents an analysis of the school capital funding system in Kentucky since 1990, using the operating-revenue analysis concepts of horizontal equity, vertical equity, and fiscal neutrality. In general one could tentatively conclude that Kentucky's capital-funding system was reasonably equitable until an expansion of district options in 2003–04 was followed by greater measures of inequity. This analysis points to specific methods for Kentucky to restore equity to its school capital funding structure as well as a model for analysis of other capital funding systems.

Keywords: equity; adequacy; school funding; school construction; Kentucky.



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La Equidad en el Financiamiento de las Instalaciones Escolares: Ejemplos de Kentucky

Resumen

Si bien existe una extensa literatura que analiza la equidad relativa en los ingresos operacionales en los sistemas estatales de financiamiento, hay una escasez de investigaciones sobre los sistemas de financiación de capital. Utilizando los conceptos analíticos de ingresos operacionales de equidad horizontal, equidad vertical, y de neutralidad fiscal, este artículo presenta un análisis del sistema de financiamiento de capital de las escuelas en Kentucky desde 1990. En general y de manera no definitiva se puede concluir que el sistema de financiamiento de capitales de Kentucky era razonablemente equitativo hasta que una ampliación de las opciones de los distritos escolares en 2003-04 fue seguida por medidas que incrementaron la desigualdad. Este análisis apunta a métodos específicos para que Kentucky pueda restablecer la equidad en su estructura de financiación de capital de la escuela, así como un modelo para analizar otros sistemas de financiación. Palabras clave: equidad, adecuación, financiamiento de las escuelas; construcción de escuelas; Kentucky

Introduction

The quality and funding of school facilities has become an increasingly important educational issue over the past two decades. Facilities quality has played a major part of school finance litigation in several states, including Alaska (*Kasayulie v. Alaska*, 1999), Arizona (*Roosevelt Elementary School District Number 66 v. Arizona*, 2003), Arkansas (*Lake View School District #25 v. Huckabee*, 2005), Colorado, Idaho (*Idaho Schools For Equal Educational Opportunity v. Idaho*, 2006), Kentucky (*Rose v. Council for Better Education*, 1989), Louisiana, New Jersey (*Abbott v. Burke*, 2005), New Mexico (*Zuni Public School District v. New Mexico*, 2002), Ohio (*DeRolph v. Ohio*, 1997), and Wyoming (*Campbell County School District v. State*, 1995). In addition, a growing body of literature has examined the relationship between the quality of school facilities and student outcomes.

Despite the importance of school facilities, advances in facilities funding generally lag behind those of current operating education funds. Facilities finance remains a local issue in many states, with funding deriving primarily from local property taxes. The reliance on local funding sources leaves facilities funding susceptible to the inequities that arose in current (operating) funding, namely that wealthier school districts can raise more funds than their less well-off counterparts, often while assessing lower tax rates. Most states have increased the equity of current operating funding by using one or more mechanisms designed to infuse state money into the schools to at least partially counteract the local-level inequities. However, the pace of facilities finance reform has lagged far behind that of current expenditures. The academic study of facilities finance equity also has not kept pace with that of current expenditures. Very few articles examine the equity or adequacy of school facilities funding. In contrast, the academic literature contains a plethora of papers discussing these issues with regard to current operating expenditures.

This paper represents a step toward increasing the body of knowledge with regard to the equity of school facilities finance. It sets forth an analytic framework that can be applied to any consideration of facilities funding and uses this approach to study the equity of school facilities financing in Kentucky. This paper consists of four sections. The first section reviews the literature

on equity analyses of facilities funding. The second section describes the analytic framework that has been used in this research. The third section contains the application of the framework to the Kentucky data. The final section discusses the broad implications of the study and the issues that must be addressed to improve the quality of any analysis of school facilities equity or adequacy.

School Facilities Equity Studies

School facilities equity can be important in school finance cases, especially when facilities quality and funding are extremely unequal (Clark, 2001). For example, the fact that several rural Alaska school districts had facilities with collapsing roofs, no drinking water, sewage back-up, and buildings filled to nearly double their capacity played an important role in the court declaring facilities financing unconstitutional in Alaska (*Kasayulie v. Alaska*, 1999). Moreover, the threat of facilities litigation in Texas induced the legislature to revamp the state's facilities finance system (Clark, 2001). States often overlook facilities equity issues, despite their importance (Vornberg & Andrews-Poole, 1998). School facilities funding in many states tends to be more of a local responsibility than the funding of current operating expenditures (Arsen et al, 2005; Hunter, 2005; Jones, 2002). The few studies of facilities finance equity that exist report greater inequities between wealthy and poor school districts (Arsen et al, 2005; Jones, 2002). Small districts also face an increased risk of receiving facilities funding at a level below that which would be equitable (Hughes, 2000).

Despite the importance of facilities funding, the study of school facilities equity and adequacy lags behind that of current operating expenditures. The literature concerning the direct relationship between school facilities quality and student achievement is developing, but no consensus has been reached regarding the extent of the benefits of adequate facilities (Picus, Marion, Calvo, & Glenn, 2005). In addition to studies of direct effects, some evidence links facilities quality to important predictors of academic success, such as teacher retention (Buckley, Schneider, & Yang, 2005).

Analytic Framework

The foregoing studies apply the usual equity measures (or a subset thereof) to the study of facilities equity, a practice consistent with the suggestions of other authors (e.g., Sielke, 1998). The framework that guides this study also rests on the foundational elements of school finance: horizontal equity, vertical equity, adequacy, and fiscal neutrality. Each of these elements will be discussed below. *Horizontal equity* refers to the equal treatment of individuals or groups (districts) that are equally situated. Under this principle, each district in a state would receive equal funding per pupil if the students in each district possessed the same skills, needs, level of preparation, etc. For this reason, horizontal equity statistics measure the extent to which each entity receives identical funding per pupil. The following statistics comprise those commonly used to measure horizontal equity: Range, Federal Range, Federal Range Ratio, Coefficient of Variation, Gini Coefficient, McLoone Index, and Verstegen Index (Odden & Picus, 2008). Our analysis emphasizes the last five of these statistics. We placed less weight on the first two because they share the flaw of increasing with inflation, which is a particularly important concern in longitudinal studies.

Horizontal equity possesses two important limitations. The assumption that needs are equal across the board cannot be maintained in practice. Some students simply cost more to educate, with children identified with disabilities being one obvious example. Similarly, facilities needs are not

identical in all districts. Second, numerical equality of funding should not be considered the last word if every entity receives insufficient funding. For these reasons, horizontal equity principles can be regarded as the starting point for a truly equitable system, but adjustments are necessary.

The principle of *vertical equity* recognizes that different groups may have different needs and attempts to measure how well the system meets the needs of each group. School finance policy that attempts to meet the needs of vertical equity generally diverges from horizontal equity, but this is needed in many circumstances. A finance system offers greater vertical equity when it provides additional funds for those students who need them than it would by providing strictly equal per pupil funding without exception. For example, consider two districts that are identical except for the fact that the first district possesses older buildings that lack some of the features of more modern buildings, such as wiring for high speed internet access and ramps needed for ADA compliance. The state would be justified in providing the first district with additional funding to meet the extra expenses of wiring the buildings and bringing them up to the standards required to provide equal access.

Unfortunately, no statistic exists that directly measures the vertical equity of a system. Instead, one of two approaches can be used. An analyst can assign “weights” to students with special needs, adjust the funding in accordance with those weights, and measure the equity of the system using the usual horizontal equity statistics (Odden & Picus, 2008). This approach, however, can only be taken when good data exist to specify the weights, which do not yet exist for facilities. The second method involves removing from the equation all the programs that address special needs and assessing the horizontal equity of the remaining programs (Odden & Picus, 2008). This method essentially provides a stronger horizontal equity analysis because it considers the equity of the programs that are supposed to possess horizontal equity.

Adequacy concerns providing sufficient funds to enable schools to educate their students to meet high standards. Adequacy differs from equity because it relies on an objective standard tied to student outcomes, rather than on a comparison of relative funding levels. However, adequacy leaves open the possibility of large inequities if some districts raise funds that are more than adequate. The Odden Picus Adequacy Index is the commonly accepted measure of adequacy for current operating funds, but an adequacy index for facilities does not currently exist.

The final principle upon which we rely is *fiscal neutrality*. This principle requires that no relationship exists between funding levels and the property wealth of school districts. Fiscal neutrality addresses the traditional school finance problem of a strong correlation between property wealth and funding levels. Fiscal neutrality can be measured by the correlation coefficient and elasticity.

A school finance system should fulfill each of these principles to the greatest extent possible. The system should have a component that ensures horizontal equity up to a certain level of funding. We would argue that this base amount of funding should be sufficient to provide an adequate education to the average student. Any adjustments to this figure should be based on educational needs and made in an amount sufficient to provide an adequate education to the children with those additional needs. Such a system should prove to be fiscally neutral because funding would be based on educational need rather than wealth. Given the foregoing, studies of school finance equity should follow the guidelines below, whenever the necessary information is available. The components of the system that are designed to produce horizontal equity should be analyzed in isolation to determine whether they provide substantially equal funding. These parts of the system also should be analyzed to determine whether they allocate sufficient funds for districts to provide an adequate education to the average student. The other components of the system should be studied to determine whether they adequately address a legitimate educational need. Finally, the system as a whole should be studied to determine whether it meets the criteria for fiscal neutrality.

While this framework has a solid justification for the analysis of current funding, the framework needs to be adjusted in facilities studies. The current state of facilities funding research does not permit a principled evaluation of the adequacy of facilities funding in relation to either horizontal or vertical equity. A stronger theoretical understanding of the relationship between facilities dollars and student outcomes would be necessary to conduct such an analysis. Work has been conducted in this area, but the theoretical understanding of the relationship between facilities funding and student achievement lags behind that of current funding and student outcomes (Picus, Marion, Calvo, & Glenn, 2005). In addition, most states currently lack a building quality assessment of sufficient caliber to permit the study of these issues. For these reasons, the current state of the art involves horizontal equity analysis and the study of whether additional funding sources address vertical equity concerns. An analysis of the outcome equity of the system can serve as a type of proxy for an adequacy study, but this should change as the knowledge grows about facilities. Finally, a study of fiscal neutrality also is possible.

The vertical equity analysis here consists of a modified version of the second approach. We measured the equity of the programs that were designed to promote horizontal equity. We took the analysis a step further by investigating the extent to which the funding that was designed to achieve vertical equity reached the intended districts. However, we could not determine whether these funding sources provided the proper adjustments due to the lack of knowledge regarding proper weights for school facilities.

School Facilities Equity in Kentucky

This section applies the foregoing framework to the facilities finance system in Kentucky. The Kentucky system possesses the advantage of being relatively advanced, as over half of the funding derives from state sources. Kentucky also possesses an assessment of building quality, which is useful. However, since it was never intended to be used for that purpose, it would be insufficient if we attempted to use it as the measure of facility adequacy.¹ The first part of this section summarizes the Kentucky school facilities finance system, while the subsequent sections present an analysis of the system.

Kentucky Facilities Finance System

The basic elements of the current Kentucky facilities finance system were enacted as part of the Support Education Excellence in Kentucky (SEEK) legislation, passed in 1990. The funding scheme has evolved over the subsequent decade and a half as the legislature attempts to address a variety of needs arising in the state. Most of the changes have been systematic modifications designed to correct for certain problems in the state, but some of the more recent legislation has been somewhat ad hoc in nature.

Two elements of the system were designed to provide horizontal equity. The first is the Capital Outlay program, which is a \$100 per-pupil flat grant from the base SEEK outlay that each district is required to place in its Capital Outlay Fund (Kentucky Revised Statutes Section 157.420(4)). The second element is the Facilities Support Program of Kentucky, which of a mandatory tax of \$0.05 (a “Nickel”) levied by all districts on each \$100 of *equivalent value* in their jurisdiction (Kentucky Revised Statutes Section 157.440(1)(b)). The equivalent value of a district is

¹ The state is in the process of developing such an assessment, which may be useful in future studies.

comprised of its real property value plus certain elements of personal property, such as automobile registration. The state equalizes the tax collection up to 150% of the average assessed per-pupil equivalent value in the state.

Kentucky provides funding opportunities in addition to those that relate to vertical equity. One category of such programs addresses the special needs of districts whose enrollment is growing rapidly. The First Growth Nickel, established in 1994, and the Second Growth Nickel, established in 2004, each permit growing districts to levy up an additional \$0.05 equivalent tax. Districts that levy the Second Growth Nickel are eligible to receive equalization of the First Growth Nickel, but the Second Growth Nickel is unequalized.

A second category of additional funding is directed toward districts to remedy deficiencies in buildings. One such program is the state's School Facilities Construction Commission (SFCC) Offer of Assistance, which provides extra debt service to districts that have unmet facilities needs. The other funding source provides emergency-needs funding to districts with buildings that the Kentucky Department of Education's building assessment rates as Category 5, the lowest building quality level. This funding comes outside of the normal funding formula and is administered by the School Facilities Construction Commission.

The third category of additional funding consists of programs with no apparent connection to vertical equity. The first of these is the Recallable Nickel, which is another tax that can be levied by all 176 Kentucky school districts but is subject to recall by the voters of the district. The second is the Equalized Facility Funding (EFF) program that provides equalization funding to districts that levied, or have debt service on, a ten-cent equivalent tax rate for building purposes for which they have not received equalization.

Horizontal Equity Analysis

We conducted two types of horizontal equity analyses. The first studied the programs designed to be horizontally equitable from 1990 to 2005. We also conducted a horizontal equity analysis of the entire system, to assess how the additional programs have an impact on the vertical equity of the system. The Capital Outlay (flat grant) and the FSPK (or equalized first nickel) funds form the foundation of the facilities finance system by providing a base level of funding. Table 1 shows the equity statistics for the Capital Outlay and FSPK programs from 1990–91 through 2004–05. The equity of these two programs increased from 1990–91 through 1996–97 and have remained extremely equitable since 1997. The Coefficient of Variation, FRR, and Gini Coefficient each approaches its ideal value of 0.00 and falls well within the generally accepted standard for the statistic. The slight deviation from the ideal value shows that a slight degree of inequity exists in these programs.

The inequities in the Capital outlay and FSPK programs arose because a handful of districts could raise revenues from their equivalent taxes that exceeded the per-pupil equalization offered by the state. For that reason, Table 1 shows that the McLoone Index equals its ideal value of 1.0, but the Verstegen Index rose slightly above 1.0, which indicates that the inequities can be traced to the upper half of the distribution. In fact, four districts raise more money per pupil from their local taxation than 150% of the state average, which is the equalization level. The funds raised by these four districts are the source of the horizontal inequity in these programs.

Table 1.

Equity statistics for the capital outlay and FSPK programs

Year	Gini	CV	FRR	McLoone	Verstegen
1990–1991	0.09	0.16	0.67	0.89	1.13
1991–1992	0.07	0.13	0.62	0.95	1.12
1992–1993	0.04	0.09	0.43	0.96	1.04
1993–1994	0.03	0.09	0.39	0.97	1.05
1994–1995	0.03	0.07	0.20	0.99	1.06
1995–1996	0.02	0.06	0.20	1.00	1.06
1996–1997	0.02	0.05	0.12	1.00	1.04
1997–1998	0.02	0.05	0.16	1.00	1.05
1998–1999	0.01	0.04	0.10	1.00	1.03
1999–2000	0.02	0.06	0.16	1.00	1.06
2000–2001	0.02	0.05	0.15	1.00	1.04
2001–2002	0.03	0.06	0.20	1.00	1.07
2002–2003	0.01	0.03	0.11	1.00	1.02
2003–2004	0.01	0.04	0.15	1.00	1.04
2004–2005	0.01	0.03	0.13	1.00	1.02
Standard	<0.05	<0.10	<0.25	>0.95	<1.05

The standards for operating expenses have been included for comparative purposes. There are no generally accepted equity standards for facilities.

Table 2.

Horizontal equity statistics

Year	Gini	CV	FRR	McLoone	Verstegen
1990–1991	0.13	0.23	1.15	0.84	1.21
1991–1992	0.13	0.23	1.11	0.88	1.24
1992–1993	0.12	0.22	0.96	0.88	1.23
1993–1994	0.12	0.22	0.95	0.87	1.22
1994–1995	0.12	0.22	1.09	0.87	1.23
1995–1996	0.12	0.22	1.07	0.88	1.24
1996–1997	0.12	0.22	1.09	0.88	1.24
1997–1998	0.12	0.22	1.06	0.89	1.25
1998–1999	0.12	0.22	1.05	0.89	1.25
1999–2000	0.12	0.22	0.97	0.88	1.24
2000–2001	0.12	0.22	0.91	0.89	1.24
2001–2002	0.12	0.22	0.95	0.87	1.23
2002–2003	0.12	0.21	0.88	0.89	1.25
2003–2004	0.17	0.32	1.37	0.88	1.44
2004–2005	0.18	0.33	1.35	0.87	1.46
Standard	<0.05	<0.10	<0.25	>0.95	<1.05

The standards for operating expenses have been included for comparative purposes. There are no generally accepted equity standards for facilities.

The remaining three categories of programs add extra funding sources on top of the foundation provided by the Capital Outlay and the FSPK. As would be expected, these programs caused the overall system to be less equitable than the Capital Outlay and FSPK programs. Table 2 shows that the addition of the other programs pushes the horizontal equity of the system below the

generally accepted standards. This result is not surprising given the fact that these programs are geared toward issues of vertical equity, but this finding begs the question of how effectively the programs serve their purposes.

It is interesting to note that the Gini Coefficient and the Coefficient of Variation changed very little from 1990–91 through 2002–03. It appears that the increased horizontal equity of the Capital Outlay and FSPK programs was offset by the horizontal inequities added when the state instituted the first growth nickel as an additional source of equivalent tax revenues for growing districts. The addition of several new revenue sources in the 2003–04 school year added substantial inequity to the system, however. As with the Capital Outlay and FSPK programs, the McLoone and Verstegen Indices indicate that the majority of inequities exist in the top half of the distribution.

Fiscal Neutrality Analysis

The story told by the fiscal neutrality statistics mirrors the horizontal equity findings. The facilities finance changes that Kentucky instituted in 2003–04 had an adverse impact on the fiscal neutrality of facilities funding in the state. They moved the state from having a reasonable degree of fiscal neutrality to moving outside some of the accepted standards. The standard measures of fiscal neutrality are the correlation coefficient between wealth and either revenues or expenditures and the elasticity of the same variables. The elasticity is calculated by regressing per pupil revenues on per pupil wealth and multiplying the regression coefficient by the ratio of average per pupil property wealth to average revenues per pupil (Odden & Picus, 2008). The elasticity, therefore, measures the rate at which school spending increases as property wealth increases. The elasticity would be 0 in a school finance system with perfect fiscal neutrality, but in practice the elasticity tends to be a positive number (meaning the wealthier the district, the more it tends to spend). Table 3 shows the fiscal neutrality statistics for facilities financing in Kentucky from 1990–91 through 2004–05.

Table 3.

Fiscal neutrality statistics

Year	Correlation Coefficient	Elasticity
1990–1991	0.13	0.10
1991–1992	0.04	0.03
1992–1993	-0.04	-0.03
1993–1994	-0.07	-0.05
1994–1995	0.07	0.05
1995–1996	-0.10	-0.07
1996–1997	-0.16	-0.10
1997–1998	0.09	0.06
1998–1999	0.08	0.05
1999–2000	0.09	0.06
2000–2001	0.10	0.07
2001–2002	0.11	0.08
2002–2003	0.08	0.05
2003–2004	0.22	0.18
2004–2005	0.20	0.18
Standard	<0.50	<0.10

The standards for operating expenses have been included for comparative purposes. There are no generally accepted equity standards for facilities

Kentucky's facilities finance system was fiscally neutral from 1990-2003. In the first few years, the system moved to a slightly negative relationship between equivalent wealth and facilities funding. The addition of the first growth nickel changed this relationship to a positive one in most years, but at all times the correlation and elasticity remained at or below the relevant standard.

The changes implemented in 2003–04 increased the elasticity of the system above the standard. The biggest contributor to this effect was the addition of an equalized nickel for growing districts. Growing districts tend to be relatively wealthy, so the addition of the extra nickel decreased the fiscal neutrality of the system. The relationship between equivalent wealth and facilities revenues has increased, meaning the wealthier districts tend to have access to greater funding than less wealthy districts.²

Vertical Equity Analysis

The analysis in the Kentucky Facilities Finance System section suggests that the various pools of additional money should be distributed as follows: The growth funds should be going to growing districts. The regular School Facilities Construction Commission funds should be going to the districts with the most unmet needs, while the urgent needs funding should be going to districts with Category 5 buildings. The Recallable Nickel and Equalized Facilities Funding programs serve undefined constituencies, so we cannot determine which districts should benefit from the programs.

We divided the districts into categories based on their unmet needs in order to study the extent to which the funding directed toward districts with unmet facilities needs reached the districts with the greatest need. We have labeled the categories low needs (per pupil unmet facilities needs of less than \$3,000), medium needs (per pupil unmet facilities needs of \$3,000 to \$7,000), and high needs (per pupil unmet facilities needs in excess of \$7,000) to create approximately equal-sized partitions of the state's districts.

Table 4.
Funding and building quality by need

District Type	SFCC Regular	Urgent Needs	Total SFCC	Total	Building Quality
Low need	\$145.30	\$37.00	\$182.30	\$692.85	2.23
Medium need	\$169.50	\$13.73	\$183.22	\$644.86	2.50
High need	\$182.32	\$17.99	\$200.32	\$619.26	2.92

Table 4 contains the School Facilities Construction Commission regular offer, the SFCC urgent needs offer, the total of the two SFCC offers, the total funding from all sources, and the building quality for each of the three district types. As would be expected, high needs districts receive the largest regular SFCC offer and have the poorest building quality, while low needs districts receive the smallest regular offer and have the highest building quality. However, the districts with the least needs and the best building quality received the largest total funding, while the districts with the highest needs and the worst building quality received the least overall funding. This result shows that the vertical equity of the system is far from perfect.

² We also conducted the equity analysis using five year rolling totals for facilities funding, thus recognizing the episodic nature of facilities needs, but the equity conclusions were nearly identical to the above using annual data.

We also examined the data with regard to district types that school finance research has shown tend to be under-funded, namely poor districts and small districts. For this analysis, we divided the districts into the categories we termed *small and poor*, *poor not small*, and *small not poor*, with poor districts being defined as those with less than \$200,000 in per pupil equivalent value and small districts being defined as those with less than 1,000 students. We compared the facilities funding available to these districts to that available to growing districts and to the districts that did not fit into any of these categories. The results of this analysis are presented in Table 5.

Table 5.
Funding by source

District Type	Capital Outlay & FSPK	Growth	SFCC	Recallable Nickel & EFF	Total
Growing	\$395.56	\$396.42	\$123.96	\$8.41	\$924.35
Small and poor	\$393.50	\$0.00	\$181.11	\$4.87	\$579.48
Poor not small	\$393.50	\$0.00	\$251.55	\$4.70	\$649.75
Small not poor	\$399.68	\$0.00	\$182.19	\$12.89	\$594.76
Other	\$394.09	\$0.00	\$195.48	\$12.77	\$602.34
Total	\$394.81	\$58.56	\$188.46	\$10.28	\$652.11

Table 5 shows that the Capital Outlay and FSPK programs were equitably distributed across the district types. The other three types of funding sources introduced horizontal inequity into the system. The funding allocated to *growing districts* went only to those districts, as is appropriate given the nature of the program. *Poor not small* districts received the most benefit from the programs administered by the School Facilities Construction Commission. Finally, *small not poor* and other districts received the most impact from the relatively small Equalized Facilities Funding and Recallable Nickel programs. The specifics of the various programs are considered individually in the following paragraphs.

The programs designed for growing districts reach its intended targets. We have no way of knowing what the exact extent of this funding should be because the knowledge base needed to evaluate the adjustment simply is lacking at this time. Despite that lack of knowledge, however, we can surmise from Table 6, which displays the per pupil unmet facilities needs and building quality scores of the various types of districts, that growing districts have the least unmet facilities needs and the best building quality of these groups of districts. The advantage held by growing districts in terms of having access to greater funding than other districts is enabling these districts to have higher quality buildings.

Table 6.
Per pupil unmet needs and building quality by district type

District Type	Per Pupil Unmet Needs	Building Quality
Growing	\$3,764.46	2.06
Small and poor	\$9,825.93	3.00
Small not poor	\$9,929.16	2.98
Poor not small	\$5,125.63	2.51
Other	\$5,339.70	2.49
Total	\$6,112.78	2.55

The distributions of the School Facilities Construction Commission programs do not match the unmet facilities needs or the relative building quality of the district types. Table 6 shows that both types of small districts possess the most unmet needs, approximately double those of the poor not small districts and other districts, and over two and a half times those of growing districts. The rank order is about the same in terms of building quality. Given these results, one would expect small districts to be the primary beneficiaries of SFCC funding. However, both types of small districts fall short of poor not small and other districts in terms of per-pupil School Facilities Finance Commission offers of funding. The vertical equity of the system could be improved by aligning funding with need. The issue of small districts arises in most states and leads to vigorous political battles over the composition of districts and the proper funding for small districts. We will return to this issue in the implications section. The Equalized Facilities Funding and Recallable Nickel programs add horizontal inequities to the system without adding any clear vertical equity. Without further definition of objectives, these programs could be deemed inequitable under either horizontal or vertical equity principles. They were rather small in scope during the relevant time period of this study, but their importance increased more recently with the equalization of the Recallable Nickel.

In summary, Kentucky has had a reasonably equitable facilities finance system since 1990, but recent changes have led to decreased equity and fiscal neutrality. In the following section, we will suggest modifications to the system to increase its equity. We will also discuss the implications of some of the other issues related to facilities funding.

Implications

The foregoing analysis reveals both some strengths and some important problems with the system. The changes to the system made in 2003–04 disrupted the equity of the system. The new programs brought more money into the system, but left unanswered are questions about how equitably the programs distributed the funding. The districts with the greatest unmet facilities needs and the lowest building quality receive the least funding. Growing districts have the least needs and highest quality buildings,³ while small districts have the lowest quality buildings and the most unmet needs.

A small number of straightforward modifications to the system could restore its status as a model of equity and fiscal neutrality. The obvious first step would be to restructure the system to retain the new money that was added in 2003–04 but distribute the funds more in line with the previous allocations. The newly created programs could be eliminated and replaced by a second equalized nickel that is available to every district. This reform would make more funding available to most districts, with the only exception being growing districts (which already have access to such funds).

Growing districts would come out about even under this plan, because their equalized growth nickel would be replaced by a nickel that is available to the other districts as well. The growing districts could retain an unequalized growth nickel to address their specific needs. This plan

³ Since growing districts need to build schools to accommodate rising numbers of students, the growth nickels could have been sufficient to address their facilities needs, thus reducing substantially unmet facilities needs. Further, since many if not most of the buildings in growing districts would be new, they would be expected to be of high quality. Thus it perhaps should not be surprising that growing districts had the least unmet needs and the highest quality buildings, even though they also tended to be among the highest property wealth districts.

would fund growing districts more in line with other districts and should lead to increased outcome equity as measured by building quality. The unequalized growth nickel would ensure that growing districts received more funding than other districts, but at a level more commensurate with their additional needs.

The more difficult facilities funding equity issue in the state relates to small districts. Small districts tend to have lower quality buildings and greater unmet needs than larger districts, which is an inequitable situation. This issue of district size confronts most states that engage in school finance reform. The cost of running a small district exceeds that of the typical district, due to inefficiencies from diseconomies of scale. The issue of small school districts possessing lower building quality has the potential to arise in any state that does not provide an upward adjustment for the funding of small districts to offset the diseconomies of scale.

A typical response is to ignore the problem by retaining small districts and funding them at a level similar to larger districts. This type of action results from an uneasy compromise between the pressure to avoid consolidation and opposition to the potential need to increase taxes to provide a small-school adjustment. However, the ultimate responsibility for educating children belongs to each state, so, in the interest of equity, each legislature should resolve the issue by applying one of three straightforward solutions. One approach would be to provide more funding to small districts to offset the diseconomies of scale. A second would be to require the consolidation of small districts into larger ones. A third option consists of a blending of the other two options. We make no recommendation regarding which option a state should choose, but argue that if a state decides against consolidating small districts, it should provide the small districts with additional per-pupil funding to improve the outcome equity of school facilities.

Kentucky has moved far beyond the traditional local funding for educational facilities and has taken steps to improve the equity and adequacy of its facilities funding programs. Nevertheless, substantial inequities remain in the system. Undoubtedly, the facilities funding system would benefit from some modifications to increase its equity as well as its overall level of funding.

That being said, Kentucky's program has many worthwhile aspects that form the basis of a sound facilities funding program and leave it ahead of most of the other states in the nation. The move to a more centralized funding stream corresponds with the changes in the allocation of current operating dollars made by most states. The nearly perfect equity of the flat grant and foundation aspects of the program provide an excellent model for other states to implement. The two vertical equity adjustments for growing districts and unmet facilities needs are also reasonable responses to vertical equity considerations, though the amount of the adjustments should be recalibrated. In sum, the Kentucky school facilities finance model is one of the better current systems used to allocate facilities funding. More states should move in the direction of increasing the level and equity of funding in the manner done by Kentucky.

One final theoretical point must be mentioned. The equity of Kentucky's school facilities has been judged based on standards derived from studies of current expenditures because no other standard exists. It is not necessarily the case that standards that are appropriate for current operating funding are appropriate for capital funding. Therefore, another area ripe for study would be whether these are the best benchmarks for this type of study or others would be better.

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