

An Assessment of Vertical Equity in Four States: Addressing Risk Factors in Education Funding Formulas

By Randall S. Vesely and Faith E. Crampton

INTRODUCTION

American society has long realized the importance of education as a tool for social and economic mobility and therefore has supported free public education with taxpayer dollars. Understanding that every child is entitled to an education appropriate to his or her needs, to varying extents state legislatures have recognized the importance of providing funding to educate children at risk of academic failure. Such children include not only those with disabilities but also children affected by poverty, urbanicity, race, limited English proficiency, and family characteristics such as low parental educational attainment.

Given the range of risk factors facing public schools and their potential effect on academic achievement, the level and extent of state funding for at-risk students is of growing concern. In particular, the funding of such programs represents an important but often overlooked theoretical concept in the analysis of state education funding systems: vertical equity. The purpose of this article is to reinvigorate the discussion of vertical equity through an assessment of the funding systems in four states that ascertains how and to what extent risk factors are addressed.

THEORETICAL FRAMEWORK

A substantial body of research exists on factors that place students at risk of academic failure. Such students face dim prospects for meaningful employment and are more likely to draw on social services and the criminal justice system throughout their lives. The National Society for the Study of Education's 101st yearbook provides an impressive synthesis of the literature on this issue.¹ Stringfield and Land open the volume

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A version of this article was presented at the Annual Conference of the American Education Finance Association, Orlando, Florida, March 2003.

1. S. Stringfield and D. Land, eds., *Educating At-Risk Students: One Hundred-First Yearbook of the National Society for the Study of Education, Part II* (Chicago: University of Chicago Press, 2002).

with a definition of at-risk students as those “who, through no fault of their own, are at risk of low academic achievement and dropping out before completing high school.”² The typology of risk factors presented in the chapter authored by Land and Legters builds on that definition, providing a framework for analysis for this study.³ Based on a comprehensive review of the research literature, they conclude that the five most frequently cited individual or family-level risk factors are poverty, race or ethnicity, limited English proficiency, poorly educated parents, and single-parent status.⁴ In addition, they note that disabled students are at greater risk of not graduating from high school than nondisabled peers,⁵ and urbanicity is a sociodemographic factor associated with academic failure.⁶ In all cases, the key to defining these variables as risk factors lies with the fact that they are beyond the school’s control. As Land and Legters state, “No school program has the power to change a child’s economic status, family structure, or the color of his or her skin.”⁷ Of these, they found poverty to be the most consistent predictor of academic failure, with the concentration of poverty at the school level exacerbating the problem.⁸ At the same time, they note the “compound nature” of risk; that is, some students fall into more than one category. For example, in 1999, 33.1% of Black and 30.3% of Hispanic children lived in poverty, in contrast to 9.4% of White children.⁹ The disparity in dropout rates mirrored these statistics: In 1999, 12.6% of Black students and 28.6% of Hispanic students dropped out of high school, compared with 7.3% of White students.¹⁰

In contrast, conceptual and operational definitions of at-risk students in education finance research have varied widely over time. For example, in 1989 Levin noted that before the late 1980s, at-risk children were referred to generically as “educationally disadvantaged.”¹¹ He went on to define at-risk students conceptually as “those who lack the home and community resources to benefit from conventional schooling practices.”¹² Although his operational definition included many of the factors in the Land and Legters typology, such as poverty, minority status, limited English proficiency, and low parental educational attainment, it did not include urbanicity or disability. On the other hand, in the 1992 annual yearbook of the American Educa-

2. *Ibid.*, vii.

3. D. Land and N. Legters, “The Extent and Consequences of Risk in U.S. Education,” in *Educating At-Risk Children: One Hundred-First Yearbook of the National Society for the Study of Education*, Part II, ed. S. Stringfield and D. Land (Chicago: University of Chicago Press, 2002): 1–28.

4. *Ibid.*, 4. Note that because single-parent family status is highly correlated with poverty, it is not used as a separate risk factor in this analysis.

5. *Ibid.*, 19.

6. *Ibid.*, 13.

7. *Ibid.*, 4.

8. *Ibid.*, 13.

9. *Ibid.*, 5–6.

10. *Ibid.*, 7.

11. H. M. Levin, “Financing the Education of At-Risk Students,” *Educational Evaluation and Policy Analysis* 11 (Spring 1989): 47.

12. *Ibid.*, 47.

tion Finance Association,¹³ disability not only was classified as a risk factor¹⁴ but also was the subject of five of the 13 chapters.¹⁵ In addition, gifted or academically talented students were considered as potentially at risk.¹⁶ However, the volume lacked an overarching conceptual definition of at-risk students. Later, in a 1994 cost analysis of three education reform models, King noted, "In general, the term *at-risk* refers to students who evidence low academic achievement, retention in grade, poor attendance rates, and high dropout rates. Common background characteristics include single-parent families, low socioeconomic status, minority families, and non-English speaking families."¹⁷ King's definition excluded three factors in the Land and Legters typology: urbanicity, disability, and low parental educational attainment. More recently, Baker defined risk factors primarily in terms of poverty and grouped low-income students with limited English proficiency and gifted students in the classification of "fringe populations."¹⁸ These variations in definitions, on both the conceptual and operational levels, point to the importance of using a research-based typology so that analysis of state education funding systems will be comprehensive.

That approximately 40% of students in the United States are estimated in the Land and Legters typology to be at risk raises serious issues of social justice and equity. It behooves policymakers to examine state education funding systems to discern whether they sufficiently target resources to enable such children to be successful academically. In doing so, it is necessary to draw on the theoretical concept of vertical equity.

Historically, education finance research has focused on measuring the more straightforward concept of horizontal equity, defined as the "equal treatment of equals."¹⁹ Under this concept, greater equality of per-pupil funding across districts indicated higher levels of horizontal equity. On the other hand, vertical equity is defined as the "appropriately unequal treatment of unequals"²⁰ and recognizes that

13. P. Anthony and S. L. Jacobson, eds., *Helping At-Risk Students: What Are the Educational and Financial Costs? Thirteenth Annual Yearbook of the American Education Finance Association* (Newbury Park, CA: Corwin Press, 1992).

14. P. Anthony, "Preface," in Anthony and Jacobson, viii.

15. P. Anthony, "Individuals with Disabilities Education Act: The Legacy Continues," in Anthony and Jacobson, 1–11; D. Versteegen and C. L. Cox, "State Models for Financing Special Education," in Anthony and Jacobson, 136–165; T. G. Finlan and W. T. Hartman, "Cost Projections for Learning Disabilities," in Anthony and Jacobson, 166–188; D. C. Thompson and R. H. Zabel, "Special Education in Rural Areas," in Anthony and Jacobson, 189–209; and S. Brown, M. Craft-Tripp, S. Gurganus, C. Crossland, and B. MacPhail-Wilcox, "Impact of Personnel Policies on Students with Disabilities," in Anthony and Jacobson, 229–252.

16. J. R. Curley, "Reaching Out to Prevent Dropping Out: Financing Programs for Gifted At-Risk Students," in Anthony and Jacobson, 273–291. Land and Legters found insufficient evidence in their review of research to include giftedness as a risk factor.

17. J. A. King, "Meeting the Needs of At-Risk Students: A Cost Analysis of Three Models," *Educational Evaluation and Policy Analysis* 16 (Spring 1994): 17.

18. B. D. Baker, "Living on the Edges of State School-Funding Policies: The Plight of At-Risk, Limited-English-Proficient, and Gifted Children," *Educational Policy* 15 (November 2001): 699–723.

19. R. Berne and L. Stiefel, *The Measurement of Equity in School Finance: Conceptual, Methodological, and Empirical Dimensions* (Baltimore, MD: The Johns Hopkins University Press, 1984), 9.

20. *Ibid.*, 2.

“differently situated children should be treated differently.”²¹ As such, vertical equity is a more complex and difficult concept to operationalize than horizontal equity. More than a decade ago, Crampton noted that as a result of this complexity, “the measurement of vertical student equity remains largely undeveloped in the literature.”²² It remains so up to the present.²³ Yet it is clear that not all students have the same educational needs, and funding strategies must seek to address students’ needs by providing greater resources to those who need additional or more intensive services to succeed. Operationalizing vertical equity as funding programs that address the risk factors in the Land and Legters typology provides a comprehensive means to assess state education funding systems’ commitment to providing vertical equity.

METHODS AND DATA SOURCE

The states analyzed in this study—Wisconsin, California, New York, and Texas—were selected for several reasons. First, the authors have a strong interest in the Wisconsin education finance system, particularly at a time of great political and economic change in the state. At the same time, the authors understand the importance of situating the analysis in a cross-state comparison and analysis that allows for demographic and geographic diversity. In addition, California, New York, and Texas often have been viewed as bellwether states politically and economically, factors that have evidenced themselves in their respective education funding systems. Fourth, because these states have substantial at-risk populations, there may be lessons for Wisconsin policymakers as to the range of funding mechanisms available to address the needs of students at risk of academic failure. The authors are mindful of the limitations of a small, purposive sample and hope to extend this research to include all 50 states at some point in the future and to look at longitudinal data to determine whether states’ commitment to at-risk funding has varied over time.

Data on the level and extent to which these states fund programs that address risk factors were taken from two data sources compiled by the U.S. Department of Edu-

21. R. Berne and L. Stiefel, “Concepts of School Finance Equity: 1970 to the Present,” in *Equity and Adequacy in Education Finance: Issues and Perspectives*, ed. H. F. Ladd, R. Chalk, and J. S. Hansen (Washington, DC: National Research Council, 1999), 20.

22. F. E. Crampton, “The Measurement of Efficiency and Equity in Oregon School Finance: The Beginning Stages,” *Journal of Education Finance* 16 (Winter 1991): 348–359.

23. Berne and Stiefel, “Concepts of School Finance Equity,” 20–21. Although it is beyond the scope of this article to present a review of research on vertical equity in education finance, it is important to note that over the last decade, few studies included vertical equity in equity analyses of state education funding systems, much less focused on vertical equity. For an example of a study that includes horizontal and vertical equity in its analyses of a state education funding system, see R. Rubenstein, D. Doering, and L. Gess, “The Equity of Education Funding in Georgia, 1988–1996,” *Journal of Education Finance* 26 (Fall 2000): 187–208. Other studies, though making mention of vertical equity, did not include it in the statistical analysis. See, for example, D. A. Verstegen, “Vertical Equity, Adequacy, and Wisconsin School Finance Policy,” *Educational Considerations* 29 (Spring 2002): 1–14. In fact, some authors have argued that equity, particularly vertical equity, is being replaced by the notion of adequacy. For example, see J. K. Underwood, “School Finance Adequacy as Vertical Equity,” *University of Michigan Journal of Law Reform* 28 (Spring 1995): 493–519.

cation's National Center for Education Statistics. First was *Public School Finance Programs of the United States and Canada: 1998–1999*.²⁴ The second source was “Overview of Public Elementary and Secondary Schools Districts: School Year, 1998–1999.”²⁵ The former is a national database of U.S. state and Canadian province education funding systems compiled approximately every 5 years. The most recent data, those for the 1998–1999 academic year, were used in this study. The second source provided data on the incidence of students with risk factors for the 1998–1999 academic year.

Given the exploratory nature of the study and limited number of states studied, statistical analysis was limited to descriptive statistics on key variables, including total student enrollments by state, and the number and percentage of these students classified as being at risk of academic failure by virtue of disability, poverty, limited English proficiency, race, and urbanicity within their respective state. An additional variable was created to address the compound nature of risk: the percentage of students classified as racial minorities in urban school districts. Descriptive statistics were also calculated for total state funding for education by state, as well as the amount and proportion of such funding for grants-in-aid to address individual risk factors.

In addition to the limitation of the sample size, the authors acknowledge the potential for inconsistencies in definitions of the individual risk variables across the four states; that is, it is possible that the specific definitions of disability, poverty, urbanicity, race, limited English proficiency, and low parental educational attainment used for funding programs may have varied across states. The data sources used usually did not define these variables operationally in the descriptions of funding programs, although funding programs targeted to low-income students usually used federal guidelines for eligibility for free or reduced-price lunch as a criterion.

CROSS-STATE COMPARISON AND ANALYSIS

The cross-state comparison and analysis of risk factors details varying magnitude or incidence of the particular risk factors from state to state. Expenditure levels and the percentage of total state aid for each of the risk categories varied dramatically as well. Beyond funding special education programs to address disability, which were offered in each state, the number and types of programs states used to address particular risk factors evinced broad variance, with some risk factors addressed by more than one category of funding.

24. C. C. Sielke, J. Dayton, C. T. Holmes, and A. Jefferson, eds., *Public School Finance Programs of the United States and Canada: 1998–1999* (Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement, U.S. Department of Education, 2001), http://nces.ed.gov/edfin/state_finance/StateFinancing.asp. In particular, this research drew on the relevant state chapters, as follows: “California,” by L. O. Picus, <http://nces.ed.gov/edfin/pdf/StFinance/Californ.pdf>; “New York,” by B. O. Brent, <http://nces.ed.gov/edfin/pdf/StFinance/NewYork.pdf>; “Texas,” by C. Clark, <http://nces.ed.gov/edfin/pdf/StFinance/Texas.pdf>; and “Wisconsin,” by M. Larsen and D. Loppnow, <http://nces.ed.gov/edfin/pdf/StFinance/Wisconsi.pdf>.

25. U.S. Department of Education, “Overview of Public Elementary and Secondary School Districts: School Year, 1998–1999,” *Statistics in Brief*, NCES 2000-333R (Washington, DC: Office of Educational Research and Improvement, National Center for Education Statistics, June 2002).

Table 1 presents a summary of the incidence of risk factors by state. Overall, the four states differ in a number of ways, beginning with size of student populations educated. These ranged from 879,542 students in Wisconsin to 5.9 million in California. Texas ranked second with 3.9 million students, and New York third with 2.9 million. With regard to the incidence of risk factors, there were substantial differences across states as well. The largest difference lay with urbanicity, which ranged from 42.0% in Wisconsin to 84.4% in California; that is, the percentage of the student population attending urban schools in California was more than twice that in Wisconsin. Here, Texas followed California with three-fourths, or 76.4%, of students in urban schools, and New York stood at 56.0%. Second was the range of minority student enrollments, with 18.1% in Wisconsin and 61.1% in California, although Texas followed closely with 55.9%. In New York, slightly under half, or 44.4%, of students were classified as racial minorities. The incidence of poverty ranged from 25.5% in Wisconsin to 46.8% in California. Again, Texas closely followed California, with 45.0% of its students considered poor. A little more than one-third, or 37.0%, of New York's student population was considered poor. The incidence of limited English proficiency was reported only for California and Texas, at 23.6% and 13.5%, respectively. The smallest disparity in incidence came with the risk factor of disability, where 10.9% of students in California received special education services, as opposed to 14.5% in New York. Wisconsin and Texas followed with 13.2% and 12.3%, respectively, of their students receiving such services.

To address what Land and Legters call the "compound nature" of risk, that is, that students may fall into more than one category of risk, the percentage of minority students attending urban schools was calculated as well. New York led in this category, where almost 80% of urban students were classified as racial minorities; Texas and California followed at 73.1% and 72.3%, respectively. In contrast, only 43.1% of urban students in Wisconsin were identified as racial minorities.

Table 2 provides an overview of the types of funding programs for each risk factor.²⁶ Most of these fall into two broad categories: They are weighting factors added to the basic aid formula or categorical grants-in-aid. Texas used basic aid weighting for funding the risk factors of disability and poverty, and New York used it for poverty and limited English proficiency. Twenty-six categorical programs were used by the four states across the six risk factors. New York made the broadest use of categorical aid programs, 15 in all, including six for students with disabilities and three for low-income students. Two funding programs were found in each of the categories of urbanicity and race. New York was the only state in the comparison that addressed parental educational attainment, even though a substantial body of research demonstrates a link between parental education level and student academic success. In addition, New York funded six programs for at-risk students who fall outside the typology used in this study (Table 3). Among the latter were funding for migrant students and incarcerated youth.

26. Note that it is not possible to list the funding for each of these because the data sources sometimes collapsed several types of funding programs for a risk category into a total funding amount.

Table 1. Incidence of Risk Factors, 1998–1999

State	Total Students	Disability		Poverty		Limited English Proficiency		Minority Enrollment		Minority Enrollment/Urbanicity (%)		
		%		%		%		%		%		
Wisconsin	879,542	115,803	13.2	224,132	25.5	nr	nr	159,262	18.1	369,517	42.0	43.1
California	5,925,964	648,404	10.9	2,770,686	46.8	1,399,210	23.6	3,618,105	61.1	5,004,294	84.4	72.3
New York	2,877,143	417,112	14.5	1,065,898	37.0	nr	nr	1,277,747	44.4	1,611,282	56.0	79.3
Texas	3,945,367	483,637	12.3	1,776,756	45.0	533,741	13.5	2,203,677	55.9	3,014,60	76.4	73.1

nr = not reported.

Source: Data from U.S. Department of Education, "Overview of Public Elementary and Secondary Schools Districts: School Year, 1998–1999." *Statistics in Brief*, June 2002, Office of Educational Research and Improvement, National Center for Education Statistics, NCES 2000-333R.

Table 2. Funding Programs for Risk Factors

Risk Factor	Wisconsin	California	New York	Texas
Disability				
Special education weights/basic aid				X
Special education categorical				
Reimbursement program	X			
Direct aid program		X	X	
Early childhood education	X		X	
High-cost students			X	
Summer school			X	
Transition to regular education			X	
Private school special education costs		X		
Poverty				
Basic aid weighting			X	X
Compensatory aid (categorical)		X		
Early childhood development	X	X	X	
Class size reduction	X			
Reading		X		
Homeless students			X	
School and community centers			X	
Urbanicity				
Early childhood education	X			
Extended school day	X			
Early elementary (K-1) curriculum	X			
Reading			X	
Demonstration projects			X	
Race				
Desegregation				
Voluntary	X	X	X	
Mandatory		X		
Native American education		X	X	
Limited English proficiency				
Basic aid weighting			X	
Bilingual categorical aid				
Reimbursement	X			
Direct aid program		X		
Parental education attainment				
Reading			X	
Adult literacy			X	

Wisconsin and California were a distant second with regard to the number of categorical aid programs for at-risk students, with nine and eight categorical programs, respectively, and Texas had none. California provided aid to low-income students through three categorical aid programs: compensatory aid, early childhood development, and reading. Wisconsin also provided funding for poor students through early childhood development and class size reduction, specifically the Student Achievement Guarantee in Education (SAGE) program.²⁷ Only Wisconsin targeted funding to students in urban school districts with three categorical aid programs: early childhood edu-

27. Funding is provided for class size reduction in schools where 30% or more of students enrolled are considered low income. See Larsen and Loppnow, 14.

Table 3. Other Funding Programs for Risk Factors

Other Risk Factors	Wisconsin	California	New York	Texas
At-risk categorical funding (unspecified)	X		X	
Dropout prevention			X	
Drug and alcohol education	X			
Migrant student education			X	
Incarcerated youth			X	
Parenting education			X	
Violence prevention education			X	

cation, extended school day, and a specialized early elementary curriculum. On the other hand, California funded three programs targeted to minority students: mandatory and voluntary desegregation and Native American education. In Wisconsin, one funding program existed for voluntary desegregation. Both states had categorical aid for limited English learners. California provided direct aid, and Wisconsin used a reimbursement formula. Like New York, Wisconsin funded programs for at-risk students that fall outside the typology used in this study. Of the two programs, one was classified as a generic at-risk funding program, and the other focused on drug and alcohol education.

Table 4 provides an overview of funding levels for at-risk programs by state. Given the differing size of student populations served, it is not surprising that total state aid to education differed sharply, from \$3.9 billion in Wisconsin to \$24.5 billion in California. New York spent \$11.8 billion in total state aid, and Texas spent \$10.5 billion. Of greater import is the percentage of state aid dedicated to at-risk programs, through weighting factors to basic aid or free-standing categorical aid programs. Here, the range was dramatic. Whereas Wisconsin dedicated only 10.5% of state education funding to programs for students at risk, New York provided a percentage almost three times as great, or 30.5%. California was a distant second at 17.2%, followed by Texas at 11.9%. In New York, funding programs for disabled students alone amounted to 25% of total at-risk funding, or \$3.6 billion, contrasted with Wisconsin, which spent \$280.5 million, or 7%, in this area. California spent 9.0%, or \$2.2 billion, on students with disabilities, compared with Texas, with 7.1% of total state aid, or \$740 million.

After disability, funding for students in poverty received the next highest percentage and amount of state aid. California led with \$1.3 billion, or 5.3% of its state aid budget dedicated to funding programs for low-income students. Texas followed with 4.3%, or \$454.7 million. However, Wisconsin and New York spent substantially smaller percentages, less than 1% of total state aid each.

None of the four states dedicated significant amounts or percentages of funding for urbanicity, race, or limited English proficiency. Neither California nor Texas provided funding specifically for students in urban school districts, and New York distributed a modest 2.3%, or \$267.2 million. Wisconsin spent less than 1% for such programs, or \$8.0 million. Texas provided no funding targeted toward students classified as racial minorities, in contrast to Wisconsin and California, which dedicated 2.0% and 2.6% of their state aid, respectively, toward these students. New York spent less than 1%, or

Table 4. Funding for Risk Factors in State School Funding Systems, 1998–1999 (millions of dollars)

State	Total State		% TSA	Disability	% TSA	Poverty	% TSA	Urbanicity	% TSA	Minority Enrollment	% TSA	Limited English Proficiency	% TSA
	Aid (TSA)	Total At-Risk											
Wisconsin	\$3,989.0	\$417.9	10.5	\$280.5	7.0	\$37.0	0.9	\$8.0	<1.0	\$79.9	2.0	\$8.3	<1.0
California	24,472.8	4,216.2	17.2	2,200.0	9.0	1,306.4	5.3	0	0	632.8	2.6	1.5	<1.0
New York	11,773.0	3,590.8	30.5	2,937.6	25.0	91.9	0.8	267.2	2.3	16.2	<1.0	58.6	<1.0
Texas	10,477.4	1,250.6	11.9	739.7	7.1	454.7	4.3	0	0	0	0	56.3	<1.0

Source: Data from C. C. Sielke, J. Dayton, C. T. Holmes, and A. Jefferson. *Public School Finance Programs of the United States and Canada: 1998–1999*. Washington, DC: U.S. Department of Education, National Center for Education Statistics, 2001.

\$16.2 million here. For students defined as having limited English proficiency, none of the states' funding exceeded 1% of state aid. New York spent \$58.6 million on English language learner programs, followed by Texas at \$56.3 million. A distant third was Wisconsin, with \$8.3 million targeted to students with limited English proficiency. California was fourth with only \$1.5 million.

Table 5 gives the reader a sense of the role at-risk funding plays as a proportion of average per-pupil state funding. To begin, average per-pupil state aid varied substantially across the four states, from \$2,656 per pupil in Texas to \$4,536 per pupil in Wisconsin. California and New York, at \$4,130 and \$4,092, respectively, were both substantially above Texas as well. Although New York ranked third in this group in terms of average per-pupil state aid, it ranked first in the proportion spent on at-risk students; that is, of the \$4,092 allocated to state aid per pupil, more than \$1,200 was dedicated to funding programs for at-risk children. Furthermore, of that amount, slightly over \$1,000 was dedicated to programs for students with disabilities. None of the other three states approached this level of fiscal commitment to vertical equity. For example, Wisconsin, with the highest average per-pupil state aid at \$4,536, spent only \$469 on at-risk funding programs, but of that amount \$313 was used for special education programs. California, ranking second in the group with average per-pupil state aid of \$4,130, spent slightly more on at-risk students, or \$565 per pupil, with \$371 for students with disabilities. Texas, with the lowest per-pupil state aid at \$2,656, dedicated \$317 per pupil to at-risk programs and \$187 per pupil for programs for students with disabilities.

CONCLUSIONS AND POLICY IMPLICATIONS

In economics, vertical equity is defined as the unequal treatment of unequals. In education, children defined as being at risk of low academic achievement or dropping out represent the operationalization of this concept. They include children in urban schools, those with disabilities, children from low-income families, students with limited English proficiency, ethnic minority students, and children from families with low parental education attainment. The four state funding systems analyzed in this article address the disparate needs of these children through a variety of mechanisms. Most of these fall into two broad categories: They are either weighting factors added to the basic aid formula or categorical grants-in-aid. Of the four states, New York

Table 5. Per-Pupil Funding for Risk Factors in State School Funding Systems, 1998–1999

State	State Aid	At-Risk	Disability	Poverty	Minority Enrollment	Urbanicity	Limited English Proficiency
Wisconsin	\$4,536	\$469	\$313	\$42	\$91	<1.0	<1.0
California	4,130	565	371	73	<1.0	7	0
New York	4,092	1,248	1,021	32	6	3	<1.0
Texas	2,656	317	187	115	0	0	<1.0

made the broadest use of categorical aid programs, in contrast to Texas, where at-risk funding was limited to basic aid weighting mechanisms.

For the most part, the incidence of particular risk factors varied substantially across states, as did the funding commitment. For example, there were stark contrasts in the percentage of students attending urban schools, ranging from 42.0% of the student population in Wisconsin to 84.4% in California. In a second illustrative example, with regard to funding commitments, New York spent one quarter of its total state education aid on students with disabilities, contrasted with Texas and Wisconsin, which spent approximately 7%.

How does Wisconsin measure up to the other states in this comparison? Although Wisconsin had the highest average per-pupil state aid of the four states, it was not the highest spender on at-risk programs, placing third behind New York and California. It might be argued that within this group of states Wisconsin had lower concentrations of at-risk students in some categories such as poverty, race, and urbanicity. Still, Wisconsin ranked second, behind New York, in the percentage of students with disabilities but ranked third in the portion of average per-pupil state aid dedicated to special education. Despite lower percentages in three of the risk categories mentioned earlier, Wisconsin provided categorical aid for students in poverty through early childhood development and class size reduction. Funding was targeted to students in urban school districts also for early childhood education, extended school days, and specialized curriculum in the early grades. Of the four states, Wisconsin spent the highest proportion of average per-pupil state aid to address the risk factor of race through a voluntary desegregation program. Of the six risk categories, Wisconsin failed to address only one: parental education attainment. Only New York provided funding for parental education attainment, through reading and adult literacy programs. Given the strong negative relationship between student achievement and low parental educational attainment, Wisconsin may want to consider funding similar efforts in this area.

It is clear that policymakers in all four states are concerned with vertical equity, although they have selected different approaches and levels of funding to address the needs of students who are at risk of academic failure. Although it is well established in the research literature that students at risk need additional resources in order to be successful, a key question remains for policymakers: How much more is needed? That question is beyond the scope of this study, which is admittedly exploratory in nature. Nonetheless, it is hoped that the results presented here will stimulate future research around such questions, for example, by relating particular programs and funding levels for risk factors to student outcomes to begin the process of evaluating the cost-effectiveness of existing state funding mechanisms.

In an educational environment in which many schools and districts struggle to meet federal and state mandates with limited funds, it is imperative to build a better understanding of the ability of funding for at-risk children to increase the vertical equity of state school finance systems. This study provides a first glimpse into this complex policy issue.

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SOURCE: J Educ Finance 30 no2 Fall 2004
WN: 0429702422001

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