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Kenneth J. Meier, Robert D. Wrinkle and J. L. Polinard
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EQUITY VERSUS EXCELLENCE IN ORGANIZATIONS A Substantively Weighted Least Squares Analysis

*KENNETH J. MEIER
Texas A&M University*

*ROBERT D. WRINKLE
J. L. POLINARD
University of Texas–Pan American*

All public organizations face conflicting goals that in theory require trade-offs. Using data from school systems, this article argues that good organizations may be able to attain more than one goal simultaneously. The research uses a substantively weighted analytical technique¹ to determine how organizations concerned with equity also meet demands for effectiveness. The best organizations do this through a more efficient translation of inputs into outputs.

According to Okun (1976), the great trade-off in public policy is between equity and efficiency. That statement is also accepted as a truism about organizations; any organization with multiple goals (such as both equity and excellence) will by definition have goal conflict and some confusion in the organization (Downs, 1967; Goodsell, 1989, p. 581; Rainey, 1997, p. 14; Simon, 1957, pp. 176, 178). Any set of two or more goals—for example, effectiveness, efficiency, equity, or responsiveness—creates the same pressure for trade-offs. At the same time, little empirical scholarship exists on how agencies deal with multiple goals, but the question could be addressed empirically if good measures of equity and excellence (or other goals) were available.² For these reasons, one ideal area through which to examine how organizations deal with demands for equity and excellence is school systems simply because they frequently measure these concepts, albeit imperfectly.

School systems are no different from other complex organizations in their approach to goals and goal conflict. Historically, the U.S. education system has often emphasized excellence for the few at the expense of equity for others

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(Oakes, 1985; Tyack, 1974). Through organizational policies of ability grouping and tracking, selective enforcement of truancy and dropout laws, and selective counseling, school systems can provide a two-tiered educational system providing excellent college prep education for White middle-class students while funneling the poor, immigrants, and minorities into vocational and general education.

The historical trade-off between equity and excellence raises a serious concern about the more recent educational reforms of the 1980s and 1990s (see Garaway, 1995; Murphy, 1989). These reforms, however, took place in an environment much different from that of the "one best system" reforms of the early 20th century (Anyon, 1995; Katz, 1992). Advocates of equity now abound, and minorities have used their access to the political system to pressure school systems to pay attention to equity concerns (Meier & Stewart, 1991; Polinard, Wrinkle, Longoria, & Binder, 1994). Contemporary school systems, therefore, face demands for both equity and excellence.

Faced with two sets of demands, how would a rational organization respond? Public organizations are no strangers to multiple goals (Rainey, 1997, p. 128). One logical response would be to break down the multiple goals into their component problems (Perrow, 1970, p. 173), reorganize the agency (Thompson, 1967, p. 79), and design processes to address the problems separately (Simon, 1957, p. 191). Alternatively, the organization might try several different experimental processes to learn how to meet the multiple goals (Downs, 1967, p. 224). As long as the goals are not diametrically opposed to each other, the organization can then integrate these individual processes to generate what are satisfactory results. The entire process is likely to be iterative as the organization incrementally determines how much real conflict exists between the goals in practice and under different organizational procedures. Although meeting multiple goals is more difficult than meeting a single goal (Katz & Kahn, 1966, p. 266), it is not impossible.

Within an organization, therefore, whether or not equity must be traded off for excellence is an open question (Murphy, 1989). This study addresses the linkage between equity and excellence by using substantively weighted least squares (SWLS), a technique designed to introduce normative values (in this case equity) into studies of policy impact (Meier & Keiser, 1996). First, a model of educational performance using a set of Texas school districts will be constructed. Within that model, measures of excellence and equity will be defined. Second, the logic of SWLS will be presented and modified so that it can assess organizational performance subject to the constraint of equity. Third, results from the analysis will demonstrate that (a) achieving equity, far from being detrimental to excellence, may actually be a complement and (b) that organizations that achieve excellence in the context of equity are different from those that do not.

EDUCATIONAL PERFORMANCE

The data set used in this analysis contains 527 Texas school districts with at least 500 students and no more than 90% Anglo students. To make sure the districts are comparable, each district must operate at least one high school. This is the universe of Texas districts with those characteristics. All data are from the 1991 school year and were provided by the Texas Education Agency.

The Dependent Variable

The state of Texas requires all students to take standardized competency tests in the 3rd, 5th, 7th, 9th, and 11th grades.³ The dependent variable, our stipulative definition of excellence, is simply the percentage of students who passed this exam in 1991. The mean pass rate was 55.9% with a standard deviation of 10.8. The mean scores are normally distributed and range from a low of 26.6% to a high of 91.4%. The normal distribution is important because it avoids the Lake Wobegone effect where all the students are above average.

Our equity measure is also based on these test scores. It is the percentage of minority (Black or Latino) students who pass the test divided by the percentage of Anglo students who pass the test. As this odds ratio approaches 1.0, it means that minority students are performing on a par with Anglo students.⁴ The mean of the equity measure is .61, with a standard deviation of .12. The districts range from a low of .29 on the equity scale (a score of .29 means a minority student is 71% less likely to pass the exam than an Anglo student) to a high of 1.08. The measure has a slight positive skew. The correlation between the excellence measure and the equity measure is .32, suggesting that equity need not be sacrificed for high performance on the exam.

Independent Variables

The input-output analysis in organization studies is widely implemented in education policy via an education production function (Burtless, 1996).⁵ Organization performance should be a function of environmental constraints, resources applied to the process, and organization policies designed to improve performance. All performance models of public bureaucracy need to control for the type of inputs the bureaucracy receives.

In the context of educational policy, poverty has been a serious constraint on the educational performance of students. Poverty not only means that students lack access to learning tools in the home (e.g., computers and pre-K programs), but it also often correlates with a less stable and less supportive home environment (e.g., single parent households, high rates of teen pregnancy, and low educational

expectations; Fuller, Eggers-Pierola, Holloway, Liang, & Rambaud, 1996; Necochea & Cune, 1996). Our measure of poverty is the percent of students from low-income families.⁶ The relationship to performance should be negative.

The relationship between expenditures and educational outcomes is one of the most contested relationships in educational policy. Examining a wealth of studies, Hanushek (1989, 1996) contends that the relationship between money and student outcomes is not consistently positive. Although this finding has been challenged by others (Hedges & Greenwald, 1996), it remains the conventional wisdom. In recent longitudinal studies, however, money does appear to matter. Murray (1995) and Evans, Murray, and Schwab (1997) found that districts that increased expenditures had improved performance afterward. Smith and Meier (1994) showed that expenditures should be considered long-term investments that influence performance only after a time lag.

Three expenditure variables are included in the analysis—per pupil expenditures for instruction, the average teacher salary, and the percentage of money from state funds. Per pupil expenditures for instruction are used in preference to total per pupil spending because many Texas districts spend lavishly on extracurricular activities. Our concern is academic performance, so the spending measure should be based on classroom instruction. Education is personnel intensive, and most spending pays salaries of teachers and other staff. Higher salaries are perceived in economic theory as a way to attract better qualified persons to a profession (Hanushek & Pace, 1995). Finally, state aid can be used to compensate for inadequate local tax bases. Although Texas is not a state known for redistributive educational policies and has a long history in court on this issue, greater funds from state governments could compensate for a meager local tax base. All relationships should be positive.

Education policies are adopted with the intent to influence student performance. Three such policies deal with the learning environment. Students cannot learn if they are absent from school; as a result, many districts have adopted policies to encourage and even to compel students to attend classes. The measure we use is the average percentage of students who attend school.⁷ Class size is also perceived to relate to student performance. Although many studies indicate that only major changes in class size are effective, schools with smaller classes should have an advantage at the margin (see Hanushek, 1996, p. 54; Hedges & Greenwald, 1996). The measure is the number of students per teacher in the district. Finally, gifted classes are generally conceded to be the best education that a school system offers. The number of students admitted to gifted classes varies greatly across districts (0% to 24% in these districts), and greater access should result in better performance. Attendance and gifted classes should be positively related to performance, and class size should be negatively related.

Teacher-based reforms are a key element in many efforts to improve performance. Three teacher measures are included: experience, certification, and minority teachers. Experienced teachers should be at an advantage in teaching because they gain the practical experience necessary for effective teaching. Countering

this argument is the idea that teacher training has improved in recent years so that less experienced teachers might actually be better able to teach students. The measure is the average years of teacher experience of the faculty. Regardless of experience, well-trained teachers are a must; one indicator of training is the use of noncertified teachers as specialists. Our measure is the percentage of teachers who are temporarily certified as subject specialists.

In contrast to the general focus on student performance, those concerned with minority education have stressed the need for minority teachers either to serve as role models for students or to adapt teaching methods to special needs. Much of this work has used the theory of representative bureaucracy as its starting point and found that Black teachers have improved the performance of Black students (Meier & Stewart, 1992; Polinard, Wrinkle, & Meier 1995) and Latino teachers have a similar impact on Latino students (Polinard et al., 1994). Although the impact of minority teachers on overall student performance is ambiguous, their importance in minority education is such that any study of equity must contain this variable.

SUBSTANTIVELY WEIGHTED LEAST SQUARES

Policy analysis is concerned not only with what is but also with what might be; not only with how organizations perform but also with how they might perform better. In a recent article, Meier and Keiser (1996) suggest that the general regression approach to policy analysis is inadequate to answer both of these questions. Their argument is that regression techniques seek to generalize to the average case and that as improvements in regression techniques (e.g., the use of influence diagnostics and robust regression) are introduced into policy analysis, regression will get better and better at generalizing to the average case.

Although such information is useful, it ignores one basic normative element of policy analysis. Policy analysis is also interested in how policy can be improved, in how organizations can become better. In such cases, more useful information can be gained by trying to generalize to the above-average cases, to those organizations that can transform inputs into a higher level of outputs than can the average organization.

In an effort to make policy analysis more sensitive to optimal performance, Meier and Keiser (1996) introduce SWLS. SWLS begins with an ordinary least squares regression. From this regression, external studentized residuals are calculated; these are essentially measures of how well agencies perform given the inputs (the independent variables) of the agency. SWLS weights those cases with a studentized residual greater than $+ .7$ as equal to 1 and those with residuals less than $.7$ as equal to $.9$.⁸ Then, a series of weighted least squares regressions are run with the weight of the low-performing cases at $.9$, $.8$, and so on, all the way down to $.1$. In the process, the slopes for the variables change and reveal that the high-performing agencies are able to get more performance out of some

inputs than the average agency. These differences are a key reason that high performers differ from average performers.⁹

In their conclusion, Meier and Keiser (1996) suggest that SWLS is a general technique, that it can be used in situations where the important concern is avoiding failures (low performance) or to infuse values into analysis. This latter situation is our concern here, and we modify SWLS accordingly. Rather than focusing on the high-performing school districts, our interest is on those school districts that get equitable results and at the same time still perform highly. That is, we seek to avoid those districts that actually trade off equity and excellence. To do this, we follow a somewhat different strategy from that of Meier and Keiser (1996).¹⁰ Based on our equity measure, we select the districts with approximately the highest 10% of equity scores (scores above .765, $n = 55$).¹¹ We then run a series of regressions, all weighting the equity districts as equal to 1.0 and gradually reducing the weight of the other districts by .1 and finally to .02.¹² The change in slopes as these regressions are run illustrate what the equitable districts are doing that is different from what the other districts are doing.

The basic philosophy underlying SWLS is that organizations differ in their ability to transform inputs into outputs. In this case, we think that the data-generating process (that is, the relationship between the independent variables and the dependent variable) is different in the equity districts compared to the nonequity districts. The analyst needs to look at the differences between these sets of cases to see how some organizations consider equity while educating students. Such a philosophy is appropriate in this case because the consistent finding in the literature is that schools vary in quality and their ability to translate inputs into outputs. Some of these districts, we hypothesize, produce high pass rates (excellence) at the same time they produce equity. How this is done is revealed by the SWLS analysis.

FINDINGS

The first step in the SWLS process is to run an ordinary least squares regression. Those results are shown in Table 1. Because these results provide a base from which to compare, some discussion is in order. First, environmental constraints have a major impact on student performance, for every 1 percentage point of students from low-income families, the exam pass rate drops by .35 percentage points (all other things being equal). Second, money appears to matter but not in all cases. An increase of \$1,000 in teachers' salaries is associated with an increase of 1.45 percentage points of students who pass the exam. Neither per capita instructional funds nor percentage of state funds, however, is statistically significant although both are in the correct direction.

The three nonteacher policies are all related to student performance in the predicted direction. A 1-percentage-point increase in student attendance is

TABLE 1: Organizational Excellence: Determinants of Student Pass Rates—Ordinary Least Squares

<i>Independent Variable</i>	<i>Dependent Variable = Exam Pass Rates</i>		
	<i>Slope</i>	<i>SE</i>	<i>t-Score</i>
Environment			
Percent low income	-.3542	.0280	12.64
Financial			
Instruction money (k)	.1403	1.8359	.08
Teacher's salary (k)	1.4464	.3594	4.02
State aid percent	.0422	.0254	1.66
Policy			
Attendance	1.0342	.2993	3.46
Gifted classes	.1894	.1029	1.84
Class size	-.9161	.3507	2.61
Teachers			
Minority teachers	-.1090	.0246	4.42
Certified teachers	-.0824	.0731	1.13
Teacher experience	-.2138	.2232	.96

NOTE: $N = 527$; $R^2 = .55$; adjusted $R^2 = .54$; $s_{yx} = 7.32$.

associated with a 1.03-percentage-point increase in student performance. A 1-percentage-point increase in gifted class size is associated with a .19-percentage-point increase in student performance, although this relationship is only borderline significant. Finally, an increase of one student per teacher in class size is associated with a drop of .92 percentage points in student performance.

Teacher policy measures are not positively related to performance; in fact, all the relationships are negative. Neither the relationship for noncertified teachers nor the relationship for teacher experience is statistically significant. The significant relationship for minority teacher percentage suggests that for every percentage point increase in minority teachers, student performance drops by .1 percentage point. This finding is a serious concern for the literature that contends that minority teachers benefit minority students. A negative relationship implies that nonminority students will do worse even if minority students actually do better.

Ten iterations of SWLS were run on this regression using the equity measure to select weights for the weighted least squares. Each regression decreased the weight for the low-equity cases by .1 except the last run, which used .02 (so that the last weight was .02). To illustrate how the regression coefficients change with these, we have graphed several in Figures 1 and 2. In both figures, the metric treats the ordinary least squares (OLS) coefficients in Table 1 as equal to 1.0 so that graphs can be interpreted as a proportional change in the slopes.

Figure 1 shows the values of the slopes for the state aid percentage and teachers' salaries as the low-equity districts receive less weight. The percentage of state aid, which is not significant in the ordinary least squares regression,

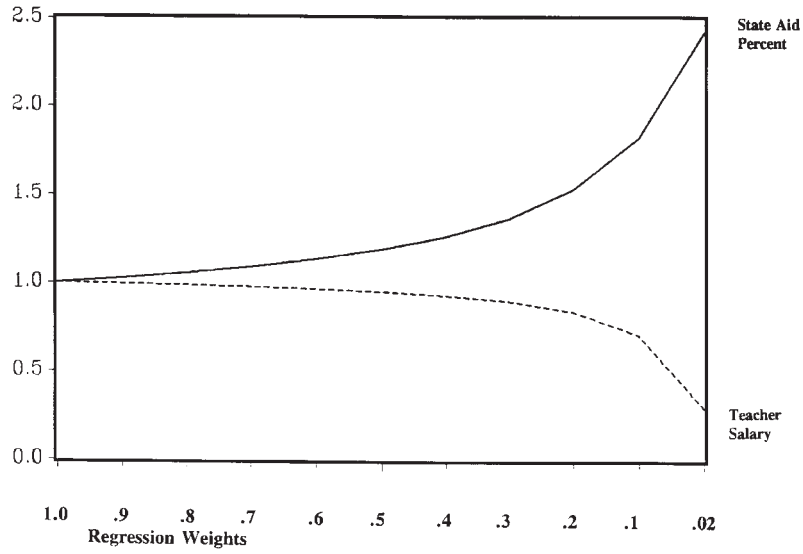


Figure 1: Change in Slopes for State Aid and Teacher Salaries

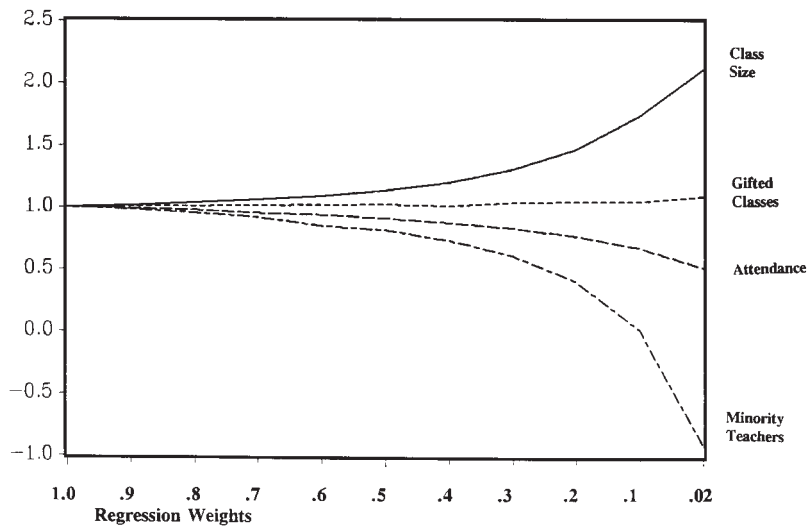


Figure 2: Change in Slopes: Gifted Classes, Class Size, Minority Teachers, and Attendance

TABLE 2: Excellence Constrained by Equity: Determinants of Student Pass Rates—Substantively Weighted Least Squares (weight = .02)

<i>Independent Variable</i>	<i>Dependent Variable = Exam Pass Rates</i>		
	<i>Slope</i>	<i>SE</i>	<i>t-Score</i>
Environment			
Percent low income	-.5602	.0387	14.47
Financial			
Instruction money (k)	3.0921	1.5640	2.00
Teacher's salary (k)	.4185	.4184	1.00
State aid percent	.1022	.0273	3.75
Policy			
Attendance	.5363	.2454	2.19
Gifted classes	.2066	.1467	1.41
Class size	-1.9380	.3442	5.63
Teachers			
Minority teachers	.1004	.0304	3.31
Certified teachers	-.2842	.0760	3.74
Teacher experience	.2765	.2748	1.01

NOTE: $N = 527$; $R^2 = .50$; adjusted $R^2 = .49$; $s_{yx} = 2.90$.

gradually increases its impact until the slope is 2.42 times larger in the final weighted regression (and statistically significant). Figure 1 also shows how the impact of teachers' salaries has less and less impact as the nonequity districts are downweighted until it is no longer statistically significant (about 29% of the original impact).¹³

Figure 2 illustrates the range of patterns with graphs for class size, gifted classes, class attendance, and minority teachers. Gifted classes and attendance show relatively moderate changes. Class size increases in impact, eventually doubling the size of the slope coefficient. Minority teachers have an especially interesting pattern. The percentage of minority teachers was negatively related to student performance in the OLS equation. As the nonequity districts are downweighted, however, the negative impact of this variable drops eventually to nonsignificance and then becomes positive and significant. In districts with greater equity, minority teachers are associated with increased student performance.

The final SWLS regression is shown in Table 2. An examination of the relationships in Tables 1 and 2 shows that equitable districts have patterns distinctly different from nonequitable districts. An examination of these differences can provide clues as to factors that permit a school system to pursue both excellence and equity.

In equitable districts, the constraint of the economic environment is greater; the impact of low-income students is 61% greater in the equity districts. This does not mean that equity districts, as a result, generate lower performance; their mean pass rate is 64% compared with 55% for the nonequity districts (Anglos in

equity districts actually score a fraction higher than they do in the other districts). The relationship likely signifies that equity districts have overcome some of the poverty factors and are now faced with the most hardcore cases, thus the greater level of constraint.

The financial variables indicate that state aid is a key for equitable districts. Each percentile increase in state aid has 2.42 times the impact in equity districts. Although Texas is not known as a state with major redistributive funding for education, what funding they do provide appears crucial for those districts concerned with equity.¹⁴ Teacher salaries are no longer significantly related to performance in the equity districts, but per capita instructional funding is, albeit modestly. In combination, these findings suggest that money allocated to instruction and programs rather than teachers' salaries are key organizational criteria in these equitable school systems.¹⁵

The policy variables show another divergent pattern. Class attendance is much less important in the equity districts than in all districts. It is still a positive factor but at a much lower level (52%), suggesting that class attendance is only a necessary condition for learning. Once students are in class, performance depends on other factors. Expanded gifted classes seem to have little impact on student performance in the equity districts. What does matter a great deal is class size. A reduction in the size of classes has twice the impact in equity districts. This suggests that equity districts get more effective teaching out of smaller classes than do the nonequity districts.

Finally, teacher variables, with one exception, remain disappointing. The one exception is minority teachers. In equity districts, minority teachers are positively associated with higher performance; a 1-percentage-point increase in minority teachers is associated with a .10-percentage-point increase in passing the exams. At this ratio, a 20-percentage-point increase in minority teachers has a modest 2.0-percentage-point increase in pass rates. Given these are high-equity districts, the relationship suggests that the impact of minority teachers is in improving the performance of minority students, which is consistent with the work of Meier and Stewart (1992) and Polinard et al. (1995). This finding is consistent with the suggestion by Hanushek (1989) that the highest priority in reform should be improving the quality of teachers. Clearly, an interesting process analysis would focus on the role of minority teachers in the equity districts relative to their role in nonequity districts. This finding also suggests that those who contend a representative bureaucracy might actually perform better could be correct (Thompson, 1976).¹⁶

We should stress again that the differences between the equity and the nonequity districts are the result of differences in the relationships between the independent and dependent variables. It is not because equity districts have more favorable inputs. Equity districts differ significantly from nonequity districts for only 3 of the 10 independent variables. Equity districts have 5.1% fewer low-income students, spend \$276 more per student on instruction, and have 1.1 fewer

students per class. Although these are advantages, they are small ones and not nearly large enough to explain the 9-percentage-point difference in test scores.

CONCLUSION

This study applied the technique of SWLS to organizational performance. A long-standing concern in the policy literature is the trade-off between excellence (or efficiency) and equity (Garaway, 1995; Okun, 1976). This study challenges the trade-off viewpoint in two ways. First, there is not necessarily a trade-off between equity and excellence; some organizations can do both. Specifically, districts can perform well on the standard measures of educational performance without creating a tracked system that provides good quality education to some students at the expense of others. The relationship between equity and excellence in these Texas districts was positive not negative. As Perrow (1970, p. 174) once noted, goal conflict and tension can be good for an organization.

Second, organizations that are equitable use their resources in ways different from those that are not. Money and class size matter more in these districts suggesting that they use resources more effectively than the average system. The lesson is that organizations can attain multiple goals but must effectively use their resources to do so. Teacher salaries, experience, and certification matter less although minority teachers become a positive factor. These relationships imply that how these districts organize their resources and their educational programs is what matters rather than the total amount of resources. Just as all organizations vary in their ability to transform inputs to outputs, school systems vary in their ability to take resources and produce educated students. Systems that stress equity are in general superior at this to systems that do not.

This study was the first effort to explore the linkage between excellence and equity using SWLS. Much of the literature in this area is descriptive, yet a great deal of work suggests a consistent trade-off. The significantly different findings in this study point out a need to replicate our results with other sets of data both at the aggregate and the individual level. Such studies can reveal much about how organizations deal with equity without compromising performance. The current analysis is only the first step, however. SWLS can identify both excellent performers within the context of equity and the variables that these performers manipulate well. Only a well-designed process evaluation can take the assessment the next step to determine what the specific organizational processes are.

NOTES

1. All data and documentation necessary to replicate this analysis are available from the senior author.

2. The urban services literature deals somewhat indirectly with this issue. See the summary of that literature in Frederickson (1997).

3. We use Texas school systems for convenience because they have many multiracial schools and an excellent database. We encourage others to address this same question in different types of organizations to see if our findings are generalizable.

4. The odds ratio is the accepted method of measuring interracial equity (see Meier & Stewart, 1991). It is superior to the alternative of subtracting the two sets of scores because the subtraction measure is bounded by 0 and 100 and thus susceptible to both ceiling and floor effects. Such measures are often heteroscedastic because variance is by definition limited at the ends of the scale. The odds ratio, which is theoretically infinite, avoids these problems.

5. This literature is far too large to cite comprehensively. See the extended bibliography in Burless (1996).

6. Median family income in the school district, when included in Table 1, is unrelated to educational performance. Our measure of low income is the percentage of students who are eligible for free or reduced-price meals in the school lunch program.

7. This might also be an environmental variable measuring commitment to education by students or their families.

8. The selection of .7 is arbitrary. In a simulation of SWLS, Gill (1997) finds that the technique will converge with a parameter as low as +.3. Gill relates the selection criteria to known statistical distributions in an attempt to provide the statistical grounding for the technique.

9. SWLS differs from OLS in its fundamental objective. OLS is interested in estimating population parameters in an efficient and unbiased manner. SWLS is interested in demonstrating how subsets of the data differ from other subsets. It is not an estimation technique per se but rather a technique for isolating factors that affect performance in subsets of agencies.

10. Meier and Keiser (1996) use residuals from the OLS regression to generate their weighted cases; we calculate our weights by dividing minority pass rates by Anglo pass rates. Our equations gradually downweight the inequitable districts (rather than the low performers) in the regressions.

11. We use the most equitable 10% of the districts rather than the equity score directly because using the equity score directly would overemphasize the performance of a small number of districts. We want to be sure that enough districts remain as equitable so that our findings are not the idiosyncratic result of one or two districts.

12. We stop the process at .02 rather than continuing to zero simply because continuing to zero would result in some of the slope impact being allowed to be captured in the intercept term. By keeping the nonequity districts as an anchor, the different relationships between inputs and outputs becomes more clear.

13. These relationships suggest that the association between teachers' salaries and performance might be spurious, that both variables might be caused by a third variable.

14. From a management perspective, this suggests looking at what these equity districts do with state aid and how that differs from what the others do. This is an excellent situation for in-depth case studies.

15. Some of this allocation might well be to technology. In a study of statewide education systems, Waller (1998) found that technology (e.g., computer equipment) was significantly related to improvements in educational performance.

16. This finding also suggests that a representative bureaucracy might also be valuable in the process of service delivery (see Theilemann & Stewart, 1996).

REFERENCES

- Anyon, J. (1995). Race, social class and educational reform in an inner-city school. *Teachers College Record*, 97(2), 69-94.

- Burtless, G. (1996). *Does money matter? The effect of school resources on student achievement and adult success*. Washington, DC: Brookings Institution.
- Downs, A. (1967). *Inside bureaucracy*. Boston: Little, Brown.
- Evans, W. N., Murray, S. E., & Schwab, R. M. (1997). Schoolhouses, courthouses, and statehouses after Serrano. *Journal of Policy Analysis and Management*, 16(1), 10-31.
- Frederickson, H. G. (1997). *The spirit of public administration*. San Francisco: Jossey-Bass.
- Fuller, B., Eggers-Pierola, C., Holloway, S. D., Liang, X., & Rambaud, M. F. (1996). Rich culture, poor markets: Why do Latino parents forego preschooling? *Teachers College Record*, 97(4), 400-418.
- Garaway, G. B. (1995). The equity/excellence dialectic: Pluralism and the impact of educational reform. *Equity & Excellence in Education*, 28(1), 65-72.
- Gill, J. (1997). Generalized substantively reweighted least squares regression. *Political Methodology*. http://wizard.ucr.edu/polmeth/working_papers97.
- Goodsell, C. T. (1989). Balancing competing values. In J. Perry (Ed.), *Handbook of public administration* (pp. 575-584). San Francisco: Jossey-Bass.
- Hanushek, E. A. (1989). Expenditures, efficiency, and equity in education: The federal government's role. *American Economic Review*, 79(1), 46-51.
- Hanushek, E. A. (1996). School resources and student performance. In G. Burtless (Ed.), *Does money matter? The effect of school resources on student achievement and adult success* (pp. 43-73). Washington, DC: Brookings Institution.
- Hanushek, E. A., & Pace, R. R. (1995). Who chooses to teach (and why)? *Economics of Education Review*, 14(1), 107-117.
- Hedges, L. V., & Greenwald, R. (1996). Have times changed? The relation between school resources and student performance. In G. Burtless (Ed.), *Does money matter? The effect of school resources on student achievement and adult success* (pp. 74-96). Washington, DC: Brookings Institution.
- Katz, D., & Kahn, R. L. (1966). *The social psychology of organizations*. New York: John Wiley.
- Katz, M. B. (1992). Chicago school reform as history. *Teachers College Record*, 94(4), 56-72.
- Meier, K. J., & Keiser, L. R. (1996). Public administration as a science of the artificial: A methodology for prescription. *Public Administration Review*, 56(5), 459-466.
- Meier, K. J., & Stewart, J., Jr. (1991). *The politics of Hispanic education*. Albany: State University of New York Press.
- Meier, K. J., & Stewart, J., Jr. (1992). Active representation in educational bureaucracies: Policy impacts. *American Review of Public Administration*, 22(3), 157-171.
- Murphy, J. (1989). Is there equity in educational reform? *Educational Leadership*, 46(1), 32-33.
- Murray, S. E. (1995). *Two essays on the distribution of education resources and outcomes*. Unpublished Ph.D. dissertation, Department of Economics, University of Maryland.
- Necochea, J., & Cune, Z. (1996). A case study of within district school funding inequities. *Equity & Excellence in Education*, 29(4), 69-77.
- Oakes, J. (1985). *Keeping track: How schools structure inequality*. New Haven, CT: Yale University Press.
- Okun, A. (1976). *Equality versus efficiency: The big tradeoff*. Washington, DC: Brookings Institution.
- Perrow, C. (1970). *Organizational analysis: A sociological view*. Belmont, CA: Brooks/Cole.
- Polinard, J. L., Wrinkle, R. D., Longoria, T., & Binder, N. E. (1994). *Electoral structure and urban policy: The impact on Mexican American communities*. Armonk, NY: M. E. Sharpe.
- Polinard, J. L., Wrinkle, R. D., & Meier, K. J. (1995). The influence of educational and political resources on minority students. *Journal of Negro Education*, 64(4), 463-474.
- Rainey, H. G. (1997). *Understanding and managing public organizations* (2nd ed.). San Francisco: Jossey-Bass.
- Simon, H. A. (1957). *Administrative behavior* (2nd ed.). New York: Free Press.
- Smith, K. B., & Meier, K. J. (1994). Bureaucrats, markets and schools. *Public Administration Review*, 54(4), 511-558.
- Theilemann, G. S., & Stewart, J., Jr. (1996). A demand side perspective on the importance of representative bureaucracy. *Public Administration Review*, 56(2), 168-173.

- Thompson, F. J. (1976). Minority groups in public bureaucracies. *Administration and Society*, 8(2), 201-226.
- Thompson, J. D. (1967). *Organizations in action*. New York: McGraw-Hill.
- Tyack, D. B. (1974). *The one best system: A history of American urban education*. Cambridge, MA: Harvard University Press.
- Waller, G. (1998). For the want of a modem and a comfortable chair: School facilities and state education performance. *American Journal of Political Science*, 42(2), 705-708.

Kenneth J. Meier is the Charles Puryear Professor of Liberal Arts at Texas A&M University. A past editor of the American Journal of Political Science, his research interests include designing new methods for public policy, constructing a normative theory of bureaucracy, and studying any phenomena that strike his fancy.

Robert D. Wrinkle is a professor of political science at the University of Texas–Pan American where he teaches in the Master of Public Administration Program. His research interests include Latino politics, federalism, education reform, and immigration policy. He is best known for his excellent sense of direction.

J. L. “Bubba” Polinard is a professor of political science at the University of Texas–Pan American where he teaches public law and minority politics. He is past chair of the Pre-Law Advisors National Council and served as a lay member of a panel of the State Bar of Texas. He is known for applying innovative methods to public policy questions.