A Theoretical and Empirical Study of Institutions Inside School Organizations

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ABSTRACT

The paper applies New Institutional Economics concepts to transactions between key actors – students, teachers, parents, and school directors -- within school organizations. It views schools as governance structures within which contracting takes place.

A conceptual framework incorporating co-production, transaction costs of monitoring transactions between actors, formal and informal "rules of the game" within schools, property rights of students and teachers, clarity of organizational objectives and social capital is presented.

An empirical study examines intra-organizational institutions in a sample of public and private primary schools in Chile, establishing that it is feasible to operationalize variables characterizing a school's institutional environment, and suggesting that there is a positive association between institutions favoring informal contracting and school performance.

Note: This study is drawn from a larger work in progress:
McMeekin (forthcoming) *Incentives to Improve Education: A New Perspective.* Cheltenham, UK and Northampton, MA, USA: Edward Elgar Publishing

A Theoretical and Empirical Study of Institutions inside School Organizations*

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1. Introduction

This paper applies institutional concepts at the intra-organizational level to examine the role of institutions inside schools. It takes the position that schools are governance mechanisms within which transactions take place. These transactions constitute contracts of several sorts, ranging from formal contracts, such as teachers' employment contracts, to highly informal contracts of a relational nature. The central hypothesis is that the more the institutional environment within the school is favorable to making and upholding agreements and commitments, the better the school's performance.

Transactions occur between the main actors in the school's community: students, teachers, parents, school directors, the education authority or Board, and the external environment in which the school exists. Note that the external environment includes higher-level (state or national) education authorities, teachers' unions, employers, media, taxpayers and the community at large. All of these elements in the school's external environment have an influence on what happens inside the school but are not part of the school's immediate community nor directly involved in the process of producing learning.

The discussion follows John R. Commons' concept of the transaction as the most basic unit for analyzing the economics of organizations (COMMONS, [1934]). Examining contracting within organizations implies looking at interactions between actors at an extremely micro level. Kenneth Arrow once wrote that: "[T]he New Institutional Economics movement…. consists of answering new questions… it merges into economic history, but brings sharper nanoeconomic (if my Greek is right, 'nano' is an extreme version of 'micro') reasoning to bear than has been customary" (ARROW, K. [1987] p. 734). Arrow's term nanoeconomics is appropriate for study of the way institutions work inside schools.

Writing in the *Handbook of Research on Educational Administration*, Brian Rowan and Cecil Miskel (1998) review research on institutional factors in schools. They find that:

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> "[T]he new institutionalism presents a powerful set of explanations for the structure and functioning of educational organizations in modern societies…. [W]e feel that two areas of institutional analysis need immediate attention in the field of educational administration. The first is the application of institutional theory to the study of teaching and learning in schools…. A second area that seems underdeveloped is the application of principal-agent theory and transaction cost economics to problems of schooling. These aspects of the new institutionalism have not entered the educational analysis of schooling as completely as they could. To be sure, a few studies reviewed here applied these perspectives fruitfully to the analysis of schools as organizations, but beyond these, we did not find much organizational analysis of schooling using principal-agent theory and transaction cost economics. This is unfortunate because economists and political scientists are at the forefront of a movement to develop a 'positive theory of institutions,' one that can describe an array of governance arrangements that potentially can improve the efficiency and productivity of educational transactions…. Immediate work is needed to see how the common governance mechanisms studied in transaction cost economics and principal-agent theory can be applied to the analysis of teachers' work and to improving the effort and engagement that students put into learning" (ROWAN and MISKEL [1999], pp. 378-379).

This paper seeks to apply institutional concepts in the way these authors suggest.

Most work in the economics of education has focused on the rate of return to investments in education, viewed at the national level; or has used production functions to explore what inputs into the "black box" of the school are associated with improvements in outputs, usually measured by achievement tests. Murnane and Nelson [1984] argued that understanding the determinants of successful education require not only studies of production functions but also "examining why the process of experimentation proceeds in some settings with enthusiasm, skill and persistence, while in other settings, experimentation and creative problem solving take place only slowly and often ineptly" (p.370). WINKLER and ALVAREZ [1998] discuss the importance of institutions in schools in Latin America, emphasizing the complexity of principal-agent relationships in education. Their work does, however, not present a model of how institutions function in schools or attempt to characterize or measure institutional climates.

A recent study of institutions and education by Ludger Woessman [2001] draws on data from the 1995 application of the Third International Mathematics and Science Study (TIMSS) relating to the institutional characteristics of school governance authorities, usually at the national level. His work shows that countries whose education systems have features usually associated with strong institutions have significantly higher performance on the TIMSS than other districts. The present study constitutes a first attempt to study institutional

factors within individual school organizations and to present an explanatory model of how they work. The following section presents the theoretical framework for the study; the subsequent section draws on an exploratory study of institutions within schools and their relationship to school performance. The concluding section considers some implications of this study.

2. The Theory

A number of concepts, most well known in New Institutional Economics, underly the theory presented here.

2.1 Co-production.

An important if obvious concept is that the production of learning takes place in the minds of students; it is unlike the production of inanimate articles. DAVIS and OSTROM [1991] introduced the idea of "co-production" in education, whereby both the producers -- teachers and schools -- and the students who are the beneficiaries of schooling must work together in a cooperative fashion to make learning happen. (Other fields in which co-production occurs and where beneficiaries must participate in the "production process" include health care and police crime-prevention work.) DAVIS and OSTROM ([1991], pp. 324-325) state that: "Viewing the production of education as a process involving both the school and the students with their families as essential partners in a production process enables one to address questions somewhat differently than the more traditional view of looking at a school as the solitary producer". Transactions of a contractual nature, albeit very informal ones, take place between the participants in the co-production process.

2.2 Property Rights

If schools are governance mechanisms in which contracting takes place, what is the nature of the contracting and what does it concern? The contract-like agreements and commitments involve the property rights of the actors in a school community, who engage in multiple transactions or informal contracts involving their property rights. North ([1990], p. 33) describes property rights as, "the rights individuals appropriate over their own labor and the goods and services they possess". The most important property rights that teachers and students control are the energy and effort they devote to their respective teaching and learning tasks. Property rights in labor exist because the transaction costs of monitoring the activity and the outputs of producers -- the teachers and students – are too high to make it worthwhile to write complete contracts. Managers and supervisors have very incomplete information about what goes on inside classrooms or during students' study time. As MURNANE and COHEN [1986] emphasize, it is not possible to monitor output in the same way one can monitor piece-rate contracts. There is, thus, a fairly wide margin within which the teachers and students can vary the level of effort they expend. In other words, those who "own" the labor have

considerable discretion over how they use it. Transactions between actors take the form of micro-level contracts under which the participants negotiate and agree about how they will exercise that discretion and use their labor to perform their assigned tasks.

Teachers also possess human capital in the form of the knowledge they have accumulated and can impart, as well as the professional skill they have acquired through training and experience. Students have a form of human capital as well, based upon the schooling they have obtained in earlier grades, plus the family background with which they are endowed and which has a powerful impact on their performance. This human capital becomes part of the actors' property rights. Both categories of actors employ these rights – their human capital in combination with their labor -- in performing their respective tasks.

2.3 Agency Relations

Relationships between principals and agents are extremely complex in school settings. In transactions between the same two parties, the roles of principal and agent may even shift, depending on many factors. (For example, teachers are the agents of the students when they are performing the service of teaching, but students take on the role of agents in carrying out the assignments teachers give them. Teachers' unions are the agents of their member teachers, but teachers act as agents of the unions when taking strike action.) Most if not all transactions in schools embody conflict of interest, asymmetric information and transaction costs.

Even though a teacher may love teaching and want to keep the job, he or she probably does not want to perform it exactly the way the supervisor wishes, or with the same intensity of effort. And although students may understand the importance of doing well on a test, they may not want to devote the time and concentration necessary to prepare for it. The parties to transactions have different information about the nature of the task to be performed and the quality of performance. This asymmetry of information has frequently been noted with regard to teaching. There is no way a school director can monitor the performance of every teacher, whose work largely takes place behind closed doors, or even have the same view as the teacher about what needs to be done in a specific class. And every parent knows how hard it is to know whether their child is studying hard and well.

2.4 Transaction Costs of Contracts

Transactions always have costs, including the costs of making the agreement or contract, negotiating before and during performance of the task, monitoring how well the agent implements the task and evaluating how well the original agreement has been performed. The difficulty of knowing how well a

teacher is performing makes it essentially infeasible to establish a satisfactory system of merit pay for individual teachers. In transactions between teachers and students, tests can sometimes be important sources of information, but teachers must expend their property rights in labor in designing, supervising and grading tests. Parents must expend their energy to ensure that their children are making the best efforts they can to take advantage of the education experience. Institutions influence how costly it is to make and monitor contracts.

2.5 Contracts in Schools

Does it make sense to talk about contracting within schools? Although there are some formal contracts, the great majority of transactions of a contractual nature are highly incomplete and informal. They are usually unwritten and unenforceable by a court, and depend upon private ordering for their enforcement. Contracts in schools are relational, meaning they take place between parties who will continue to deal with each other over time and between whom factors of reputation and trust are important (MACNEIL, [1978]). The more formal and visible contracts in schools are between school directors and teachers, and between school board and director. Some schools require explicit contracts concerning the degree to which parents support the school's objectives, agree to cooperate with the school, make sure that students have the time and other resources necessary to study effectively, and encourage them to make diligent efforts to perform homework and other school-related tasks. The Accelerated Schools Program requires such statements of commitment (HOPFENBERG and LEVIN, [1993]; HANUSHEK *et al* [1994], pp. 102-3.) This level of contracting is where teachers and students (and sometimes parents) establish semi-formal or informal relational "learning contracts". In their most basic form, these are agreements or "deals" governing what each party is expected to do. TUCKER and CODDING ([1998], pp. 129-30, 136-7) recommend making explicit contracts with parents and with students that cover, among other things, television watching and completing assignments. There is a literature on “learning contracts” between teachers and learners that establish exactly what the learner is expected to do (e.g. BOAK, [1998]; KNOWLES, [1986]). This kind of contracting is used most often in distance education or with mature students (at university or technical school level), who can be expected to work without supervision and whose work can be evaluated objectively. Some schools at the elementary and secondary education levels also use this kind of explicit contracting between teachers and students.

2.6 Clarity of Objectives

A concept that is important when examining institutions at the micro level, inside organizations, has to do with organizational objectives. Agency theory tells us that when an organization’s objectives are clearly expressed and communicated, and are understood and accepted by its members, this tends to reduce principal-agent differences and problems. Analyses of institutions at the

national level have not given great attention to objectives (although most observers would agree that, in emergency circumstances such as war, nations tend to draw together and function with a relatively high degree of efficiency.) In education, however, clarity and consensus about objectives has a great deal to do with performance.

2.7 Social Capital

A final factor in this conceptual framework is the climate of cooperation and trust or social capital within the school. When a society or an organization has within it a high degree of trust and prevailing attitudes of cooperation, it is easier for its members to make arrangements of a quasi-contractual nature – commitments to carry out what has been agreed – than if the prevailing culture is one of betrayal and opportunism. Ever since James Coleman [1988] introduced the concept of social capital, educators have recognized that schools well endowed with this elusive quality tend to function more smoothly and effectively. In the present context, high levels of social capital create an environment in which community members tend to make their best efforts – whether in teaching, studying or other tasks – toward achieving agreed upon goals.

Drawing the concepts together, then, the argument of this paper is that, within the school governance mechanism, relational contracts take place. between actors who will continue to deal with each other over an extended period of time. The contracts deal with the property rights of the central actors involved in teaching and studying. The rights have to do with how hard and well the actors use their labor -- their energy, attention and effort -- in teaching as well as they can, and studying hard and effectively. Parents also exert effort to support the school and help enforce good study behavior on the part of their children. The property rights exist because of the transaction costs of establishing and monitoring contracts, both formal and informal.

A "good" institutional environment -- meaning clear goals, sound formal and informal rules, mechanisms (both formal and informal) that tend to ensure their enforcement, and an atmosphere of cooperation and trust (social capital) -- favors making and upholding contracts to use one's property rights in labor to accomplish agreed-upon educational objectives. As NORTH [1990] explains, institutions reduce uncertainty. They make people willing to undertake agreements because there is a high probability that other parties to the agreements will do their part at least reasonably well and there will be positive payoff. And since the transactions involved in the co-production of learning depend on people being willing to make commitments and do their best to uphold them, the institutional environment is fundamentally important for success.

If a school's institutional climate is favorable, the school director can establish agreements with teachers to use their energy and effort to the best of

their ability to accomplish the school's goals; informal peer pressure among teachers will tend to enforce such behavior and the individual teacher will find it worthwhile to adhere to the agreement. Similarly a teacher can "transact" with students about what they need to study and know. Examinations are the most obvious form of monitoring and enforcing these informal contracts, but approval and disapproval of teachers, peer pressure from other students, and parents' insistence that students study hard and perform well all operate to support the explicit and implicit agreements made. On the other hand if institutions do not function well within the school – if nobody really cares, or if there is no reliable benefit to teachers or students for good performance and no sanction for bad – then the agreements or informal contracts will not be made or, if made, are unlikely to be honored. As a result performance will suffer.

3. An Exploratory Study of Institutions in Primary Schools in Chile

A study team at CIDE conducted a small exploratory study of a sample of ten public and private schools in Chile to determine: (a) whether it is feasible to measure institutions within schools, and (b) whether there is an association between a school's institutional climate and its performance. The conclusion, with regard to both questions, is affirmative.

3.1 Sample Selection

The sample included five municipal (public) and five private subsidized schools.[1] The schools were chosen to be as similar as possible in order to highlight the influence of differences in institutions within them. The first step in selecting the sample was to choose schools within the same "homogenous group", as established under Chile's national system for evaluation of school performance and used for making "excellence awards".[2] Five private subsidized schools operated by the Sociedad de Instrucción Primaria (SIP) were chosen first. The SIP was established in 1856, long before there was any public education system in Chile, with the explicit aim of providing good-quality education for children of families with scarce resources. The study team chose private schools operated by the SIP for two reasons. First, they have a specific equity orientation and their students come from families with fairly low socio-economic status, similar to those in most public schools. The SIP schools are located in low-to-middle income communities; they avoid selecting students on the basis of ability, do not exclude or expel low-performing students, and try hard to keep students from

[1] Chile has had a nationwide voucher system since 1980. Vouchers of equal amounts are paid, on the basis of attendance, to municipal authorities and private operators. Chile's voucher system has been studied extensively. For information, see MCEWAN, P. [2000a], MIZALA, A. and ROMAGUERA, P. [2000 b], DELANNOY [2000], GAURI, V. [1998].

[2] For information on these awards see MINISTERIO DE EDUCACIÓN DE CHILE [2000], MIZALA; A. and ROMAGUERA, P. [2000 b]; MCMEEKIN, R. [2000]. All schools were chosen from the "Urban, middle-class" homogenous group in the Metropolitan Region of Chile.

dropping out. Second, the SIP kindly agreed to allow our interview teams access to their schools and to facilitate the process of gathering information.

Once the five private schools were selected, the sub-sample of municipal schools was then chosen from the same homogenous group on the basis of criteria designed to "pair" municipal schools with those of the SIP. Pairs of municipal and private schools were selected from the same communities, then further matched in terms of several criteria of similarity:

- Average education level of parents of students in the school;
- Schools that are very similar in terms of a "vulnerability index" compiled by the Board of School Assistance and Scholarships (JUNAEB), which measures the level of poverty of families represented in the school;
- Average income of the families of children in the school, in pesos per month;
- Family expenditure on education.

3.2 Measuring Institutions in Schools

Information was derived mainly from semi-structured interviews, although we drew upon documents and our own observations of conditions within the schools. Two experienced and trained interviewers joined the three-member study team to design and conduct interviews with: (a) directors of the sample schools, and (b) focus groups of teachers. The interviews gathered information on four variables or complexes of variables: (1) school objectives; (2) the formal rules operating in the school and formal mechanisms for their enforcement; (3) informal rules and informal enforcement mechanisms, and (4) the level of cooperation and trust – social capital – within the school. (These terms and concepts were not explicitly mentioned in the interview questions.)

The first variable was divided into two parts, reflecting, first, the clarity with which objectives are expressed, and second, how well the statements of objectives are disseminated and the degree to which they are understood and shared by members of the school community. Chile's on-going education reform provides that every school in Chile must have a statement of its mission and objectives. These were a source of documentary evidence about the clarity of the objectives. Interview questions probed to determine how the objectives are communicated to members of the community and how they are incorporated into the day-to-day activities of all members of a school's community. Schools were scored highly if the objectives were relatively few in number and subject to some degree of observation. Teachers in such schools said they carry the mission statement "in our pocket", or "we know it by heart."[3]

Each school in the sample also possessed a "Reglamento Interno" or statement of rules, regulations and sanctions in case rules are broken. These documents, as well as information from the interviews, were the documentary source for the second complex of variables. One school director spoke of going outside the main school entrance to ensure that students continued to adhere to

[3] Quoted statements are from the field notes of the study.

the dress code, even when outside the school doors. There were statements such as: “If there’s no discipline, you can’t teach”. Responses in schools with less favorable institutional environments indicated that the rules were not always observed (e.g. parents who “forgot” to pay for repairing a window their child broke) or were difficult to enforce. “There are things in the Regulations that just aren’t backed up; nobody makes people follow the rules”.

More challenging was the task of characterizing schools in terms of their informal rules and the informal mechanisms within the school’s culture for enforcing them. The study team and interviewers developed questions that would cast light on informal rules (e.g. What happens when a student is caught cheating? How do students feel about classmates who don’t respect the rules or whose academic performance is very poor? What do teachers think of colleagues whose professional performance is less than it should be, and how do they show it? How do the standards of behavior -- the atmosphere or culture in this school -- compare with other schools where you have taught?)

Both the directors and the focus groups of teachers indicated that informal means of showing approval or disapproval, often symbolic gestures, were their most important tools for encouraging good performance and enforcing discipline. They emphasized the importance of “conversation” as a means of communicating approval, disapproval, guidance or orientation, both to students and among staff. One school director said she talks to students with behavior problems about how fortunate they are to receive an education and how it will influence their later employment opportunities and well-being. Schools with strong internal institutions had more elaborate arrangements for providing recognition and praise: honor rolls, prize ceremonies, awards for a variety of good behaviors (in addition to academic success) such as “best companion”, or “has achieved greatest improvement this month”. One outstanding director, when asked how she communicated desired behavior and levels of effort to teachers, replied “By my example”.

Finally, the degree of cooperation and trust within the school was assessed on the basis of interview questions. For example: How do the students feel about studying and learning; do they admire other students who do well? How do the students show their “school spirit” or feelings toward the school? How can you tell if a (fellow) teacher has a feeling of commitment to the school and the students? When a new teacher comes to the school, how is she or he introduced to new colleagues, students, and to the rules, norms and culture of the school? In schools with high social capital, there were comments such as “[Teachers] only leave when they retire. Once they get into this school, they don’t want to leave…. Here we’re treated like people, because the Director doesn’t impose her will on us. We do things by consensus”. In several schools, teachers spoke of their relationships (with students as well as with fellow teachers) as “like a family”. Respondents in schools with high social capital indicated that students feel a strong bond with the school, spend time there

outside school hours, and return to visit after they graduate. "There's a mystique about this school". Teachers in other schools did not say there was little solidarity but did not cite positive examples of social capital or express much interest in the subject.

Evaluating the Institutional Climate. One professional interviewer and two members of the study team visited each school and participated in interviews with directors and focus groups of teachers. These teams gathered impressions of the status of each institutional variable in a school. The study developed a form for evaluating and rating schools in terms of these variables. This form or rating sheet, presented in Appendix Table A, shows the weights assigned to the variables. The weights add to 100. Schools were scored on each variable on a ten-point scale, with "10" being "the best that could reasonably be expected". The level of consensus or inter-rater reliability between interview team members was very high. The sum of the weighted scores of the variables yields the school's Institutional Index score. The theoretical maximum is 1000. Index scores ranged from 685 to 955. Team members and interviewers familiar with a variety of schools in Chile said that, if the sample had not been chosen to maximize similarity between schools, the range of both the index scores and test scores would have been much greater.

3.3 Dependent and Control Variables

(a) Dependent Variables

Dependent variables included scores on Chile's national standardized tests (Sistema de Medición de la Calidad de la Educación, SIMCE). The SIMCE tests are administered at the fourth grade level in even years and for eighth grade in odd years. The 1996 tests covered Spanish language and mathematics (in 1998, other subjects were tested.) We used the averages of schools' fourth grade Spanish and math scores from the 1996 and 1998 applications of the SIMCE tests as separate dependent variables. Another indicator of school performance (and the only indicator available in many Latin American countries) is the degree to which schools retain students in schools and minimize dropouts. We used the schools' promotion rates as a third dependent variable.

(b) Control Variables

The criteria for maximizing the similarity between sample schools were variables often used to control for background factors that might influence performance: family income, parents' education level, family expenditure on education, and the level of poverty of the families of the students. With a sample size of only ten, it was not feasible to use statistical means of controlling for background factors.

3.4 Analytical Approach

The analytical methodology used is very simple. The small size of the sample limits the statistical techniques that can be applied to test for association between the independent variable – the Institutional Index – and the dependent variables. Ordinary Least Squares (OLS) regressions measured the association between the Institutional Index and each of the dependent variables: averages of the mathematics and Spanish language scores on two applications of the SIMCE standardized tests, and the schools' pass rate or promotion rate.
Table 1 shows the results.

Table 1. Relationship between the Institutional Index and Dependent Variables

Dependent Variable	R^2	Beta	Significance (T)
SIMCE 96 (4th Grade)	.471	.03536	.028
SIMCE 99 (4th Grade)	.315	.08232	.092
Promotion Rate	.520	,0052	.019

Source: Data on dependent variables from Ministry of Education of Chile.

All the associations are in the direction theory would predict and, in the case of the relationship between our Institutional Index and both the 1996 SIMCE scores and the promotion rate, they are significant at the .05 level. For a sample of ten, this is an indication that the associations are strong.

Choosing schools as alike as possible in terms of factors often associated with academic performance provides a way of controlling for those factors. Similarity between schools in terms of family income, parents' education level, family expenditure on education and the JUNAEB vulnerability index were key criteria for sample selection. Thus a low correlation between the background variables and school performance indicates that the influence of the background variables was relatively slight. Table 2 shows the levels of association between the background variables and the 1996 SIMCE scores (the application of the SIMCE most strongly correlated with the Institutional Index). Because of the way the schools were selected, one would expect the association between the background variables and SIMCE scores to be low. The negative relationship between the JUNAEB vulnerability index and performance is in the direction theory would predict.

Table 2. Relationship between background variables and average scores on SIMCE 1996

Background Variable	R^2	Beta	Significance (T)
Family Income	.210	0.000102	.013
Parents' Education Level	.007	0.721	.118
Family Spending on Education	.002	0.000006401	.583
Vulnerability Index	.116	-2.61	.07

Source: Data on background variables from the Ministry of Education of Chile.

4. Conclusions and Implications

The study presents a conceptual framework that makes it possible to consider transactions between actors inside school organizations and the way these are affected by the organization's internal institutional climate. While this is not a substitute for production function analyses of the relationship between inputs and outputs, it offers an opportunity to look inside the "black box" of the school organization and apply economic thinking in new ways.

The empirical study of primary schools in Chile demonstrates that it is feasible to measure the institutional environment within school organizations. Although the sample is very small and the findings are preliminary, the study suggests that there is a positive association between having strong institutions and good performance. One must be very cautious in interpreting the findings of such a small exploratory study, but it is still possible to suggest certain implications of these findings that are of interest for policy.

The study reported here is part of a larger body of work on incentives to improve education. The explanatory model based on institutional concepts provides a perspective on different approaches to providing incentives, including:

- Rewards: merit pay for individual teachers and merit awards to school establishments; and
- Competition: encompassing vouchers, charter schools and various forms of within-district choice such as pilot schools.

4.1 Rewards. Although MURNANE AND COHEN [1986] did not use the phrase "transaction costs", their important early paper on merit pay schemes made it clear that measuring the performance of individual teachers is extremely difficult and may lead to undesired side effects. Most obviously, competition between teachers in a school is damaging to the teamwork that promotes good performance. And, unless teachers can understand why teacher X receives merit pay and how they (who do not receive it) can do so in the future, the effect on teacher morale and cooperation may be negative. Moreover, experience with paying teachers on the basis of simplistic pay algorithms shows that this leads to opportunistic behavior, such as teaching to the test. Or teachers may focus their attention and effort on the students most likely to improve their test scores, giving less time to both very good students and students most in need of help.

In contrast with merit pay to individuals, however, the institutional model indicates why a system of merit awards to whole schools: (1) has lower transaction costs than merit pay to individuals, (2) is more likely to stimulate cooperation and teamwork than competitive behavior and opportunism, and (3) maintains rather than undercuts the objective-setting and leadership role of the school director.[4]

4.2 Competition. With regard to vouchers and similar approaches to providing market-like competition, the institutional model reveals that the infrequent occasions on which parents chose to move their child from one school to another, and the significant costs this entails, mean that this is not like a transaction on a spot market. The effect of voucher-based competition on how teachers use their property rights is distant and muted. If public schools are sheltered from competition and do not lose staff or resources when they lose enrollment, there is essentially no impact on teacher behavior and effort.

Looking in detail at transactions within schools, one can see that choice may lead to greater school autonomy and more authority in the hands of school directors. But the effect of vouchers tends to differ from that of other approaches to choice, such as charter schools. The effect of vouchers is distant from the classroom and has little to do with institutions inside the school. Charter schools, because they are created with a strong vision of what the school should be, may have a powerful impact on the relations between parents and the school, on the clarity of objectives; and on the feeling of community among director, teachers, students and families. The effect of an intervention on formal and informal rules and enforcement mechanisms depends greatly on the nature of the individual school and its internal community. The influence of market forces on co-production processes inside schools and the way actors use their property rights is highly complex and does not conform to simplistic, one-size-fits-all assumptions. To understand the way incentives work, it is necessary to consider their impact on institutions inside the school organization.

Using institutional concepts to analyze alternative approaches to providing incentives, including those that involve external standards or "threats", yields insights of interest for policy. The institutional model also casts light on other subjects such as decentralization of education or networks of schools. This has been a small exploratory study, but it points to promising further work.

[4] For information on Chile's SNED system of merit awards to schools, see Ministerio de Educación de Chile [2000], Mizala and Romaguera [2000a], and McMeekin, 2000.

Appendix Table A

RATING SHEET: INSTITUTIONAL INDEX

School Name _____ Director_____

Address _____

FACTOR EVALUATED	WEIGHT	FACTOR SCORE (Scale of 10)	WEIGHTED SCORE (Weight X Score)
Clarity of objectives (from Proyecto educativo or vision statement)	10	0.0	0
Objetives understood by members of school community (school staff, students and parents)	15	0.0	0
Formal rules are clear, internally consistent and enforced.	25	0.0	0
Informal rules are clear and consistent with formal rules, influence behavior, and are enforced through informal means.	25	0.0	0
Spirit of cooperation and trust (social capital)	25	0.0	0
Total weight:	100	Weighted Score	0

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