# Government Policies and Higher Education Performance in the U.S. and Mexico:

# Report of a Comparative Study

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Draft 4
August 22, 2002

Organizational Performance and Policy Decisions in the U.S. and Mexico

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## About the AIHEPS Project

The Alliance for International Higher Education Policy Studies (AIHEPS), a collaboration between New York University and the Autonomous University of Puebla (AUP), was funded in September 1999 by The Ford Foundation to conduct policy research in Mexico and the United States over a three-year period with two primary objectives: (1) to improve comparative understanding of how changes in higher education policies (rules of the game) alter the nature of institutional behaviors and system performance, and (2) to serve as a vehicle for training a small cadre of younger policy scholars in both nations. The project is also aimed at building capacity at New York University and AUP for conducting further policy studies, and making the information available to appropriate policy audiences.

The following questions reflect some of the lines of inquiry the project has pursued:

- Higher education systems operate in very different policy environments as measured by such attributes as constitutional status, federal/state influence, political culture, and executive powers. Are there aspects of the policy environment that seem to be associated with particular performance patterns? Have states attempted to alter their policy environments? Are there particular combinations within policy environments that seem to facilitate or constrain the capacity of a state to adapt to changes in the external environment?
- Starting from quite different points, states appear to be changing their system designs, their arrangements for collaboration, communication and accountability, and their fiscal policies to incorporate greater emphasis on market mechanisms. How have these changes influenced performance as measured by the indicators conceptualized by the National Center for Public Policy and Higher Education in the U.S. and comparable indicators in Mexican settings? Can aspects of performance be traced to particular configurations of these "rules of the game?"
- Federal governments may play the defining role in a national system of higher education (as in Mexico), or the role of change agent, consumer advocate, and research contractor (as in the U.S.). How are federal roles changing? To what extent are federal roles complementary to those enacted by states? Are there discernible differences in system performance patterns that can reasonably be related to differences in the "rules of the game" as these are defined and implemented at the federal level?

The AIHEPS project has produced the following products, all of which are or soon will be available in Spanish and English on our web site: http://www.nyu.edu/iesp/aiheps/. Links to these products are also available through the National Center for Public Policy and Higher Education (NCPPHE). Products are written according to a mutually agreed upon framework that facilitates comparative analysis.

- Case reports for the states of Guanajuato, Jalisco, New Jersey, and New Mexico.
- Federal reports for the U.S. and Mexico.
- Design of the Study which provides a conceptual overview, describes the current model for understanding linkages between policy and performance and provides graphic and textual representations of the stages of the study. Parts of this document are reproduced in this final report.
- A summary report of the younger scholars who have been involved with the project and their contributions.[1]
- A report (*New Jersey and New Mexico: Explaining Differences in the Performance of Higher Education Systems)* that incorporates insights from the federal report and the two state reports, and suggests propositions about the linkages between policy and performance that can be inferred from the data collected in the U.S. studies. An earlier draft of this report provided a "jumping off" point for discussion involving policy leaders held in Jersey City, New Jersey, on June 21, 2002.
- A report (*Políticas de educación superior en Jalisco y Guanajuato:¿Cómo explicar las diferencias en el desempeño de dos sistemas estatales durante los años noventa?*) that provides an integration of the insights from the Mexican studies and served as the focus for a roundtable in Mexico similar to the one held in the U.S.

The following products from the third year of the project will soon be available on the web site.

- A policy paper reporting the conclusions from the U.S. meeting written in a format designed for wide distribution to a policy audience. NCPPHE will assist in the development and distribution of this paper.
- A policy paper reporting the conclusions from the Mexico meeting designed for wide distribution in that nation.
- This synthesis report that incorporates the results of the cross-national analysis of data from the two countries by the project co-directors and includes the grounded model for understanding how policy can constructively contribute to the attainment of public priorities.

Thanks to the continuing support of the Ford Foundation, the model generated during the first three years will guide an expansion of our work during the next three when we will be joined by Don Fisher and Kjell Rubenson of the University Of British Columbia in adding Canada to our national profiles. We will be increasing the number of state and provincial profiles constructed around the model. Additional profiles will individually and collectively expand our understanding of the linkages between policy environments, rules of the game, and higher education performance in the U.S., Mexico and Canada. The addition of Canada will help us gain a better understanding of the consequences of a reduced level of federal involvement in higher education systems and provide a contrast between a system that is

entirely "public" and systems that are mixed between public and private institutions. It will also make possible some comparison of the policies within different higher education systems for improving access and opportunity, including provisions for indigenous/aboriginal peoples.


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## Introduction

Contemporary literature on higher education is dominated by discussions of change, reform, purposeful transformation, and the adaptation of higher education institutions to rapidly changing environments. For at least a decade now, governments in many nations have been experimenting with regulatory and market mechanisms to improve the performance of their higher education systems. Key issues that governments, including Mexico and the U.S., have tried to grapple with include quality, productivity, cost effectiveness, and economic development.

Efforts to alter the relationships between government and higher education have been reported in Australia, Chile, New Zealand, South Africa, and the United Kingdom as well as other nations. Such global trends have helped to define the question central to this study: *how do changes in public policy affect higher education programs and services?* This question concerns policymakers and political leaders as well as leaders in higher education because it cuts both in the direction of relationships with the state as well as in the direction of higher education reform.[2]

Policy leaders hope that through purposeful change colleges and universities can become more productive while concurrently improving the quantity and quality of outcomes most essential to public priorities. While no one argues against improved performance and lower costs, there are widespread differences of opinion about the nature of policies most likely to contribute to these ends. Further, the interactions among higher education institutions and government at central and local levels have become more complex and diversified, partly as a result of the very changes policymakers have wrought and partly because of internal growth, diversification, and the maturation of higher education as an enterprise. The actual role of public policy in effecting purposeful change in higher education remains a matter of controversy.

The purpose of this study was to improve understanding of the *process* through which changes in public policy affect such higher education indicators as preparation, participation and choice, affordability, completion, and benefits in selected states in Mexico and the U.S.[3] In working with these two countries, our comparative research design has had to take into account the differing levels of economic development and structural configurations both in government and higher education. We conducted case studies of higher education policies and practices in two states in Mexico and two in the U.S. using a common protocol. We then used the case study data to try to explain differences in performance indicators at state levels in both nations. From this analysis, we generated a model to organize data, provide a common terminology and unlock the potential of comparative analysis. We believe this model simplifies and focuses our effort to understand the linkages between policy and performance in higher education systems operating in different national contexts.

The scholarly literature on these issues has generally focused on national or local cases, although the number of reports on international experiences with higher education policy changes is on the rise as evidenced by articles in such journals as *Higher Education Policy* and *Higher Education*. Research on reforms in other public sectors (such as health care systems and environmental regulation) borrows widely from the growing research in political science, political economy and other social sciences. To achieve its comparative intent, this study drew upon findings from this broader literature to examine changes in the evolving institutional frameworks in higher education in two countries with different state/society relationships, the United States and Mexico.

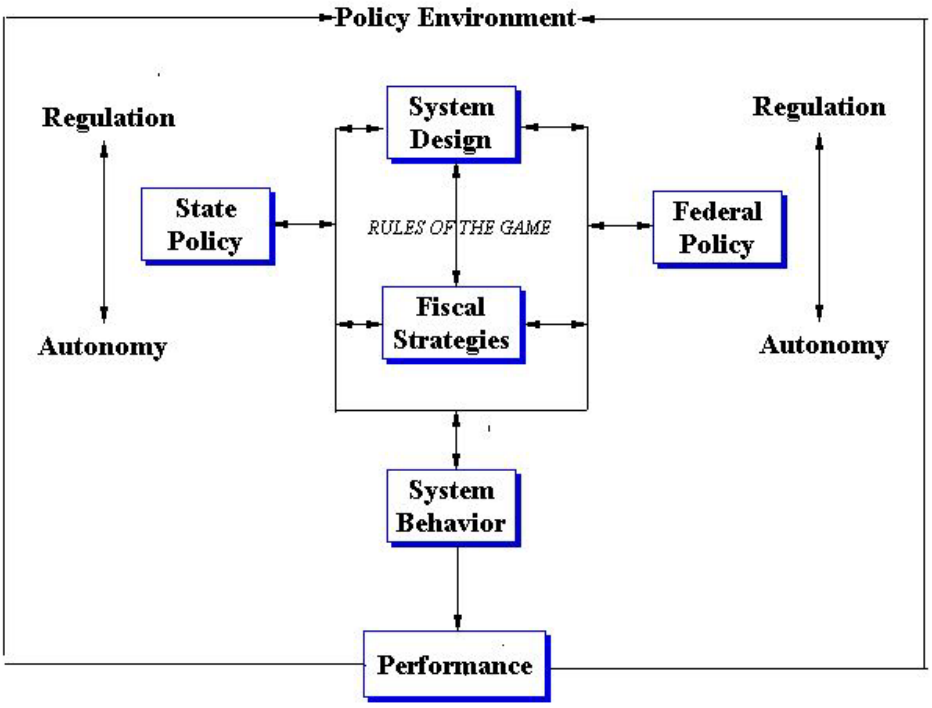
***Research Perspective***

Colleges and universities are purposive organizations designed by their creators to maximize opportunities in the policy environments in which they operate. The process of pursuing organizational advantage may create adverse consequences for public priorities defined by elected leaders. We understand policy decisions as efforts to alter "the written or unwritten rules of the game or, more formally … the humanly devised constraints that shape human interaction."[4] Rules are created and revised through a political process that, depending on the issue, brings together a shifting array of actors representing federal and state governments, the higher education community and special interest groups. Rules of the game help to define the ways in which higher education goods and services are developed and exchanged, altering the relative strength of market forces, state regulation, and institutional autonomy.[5]

Figure 1 provides a way of thinking about the relationships we observed during our study. We structured our data around four general categories: policy environments, rules of the game, system behaviors and performance. These categories help to organize the information drawn from multiple sources, including case reports, documents, and archived data.

Policy environments reflect the web of federal and state decisions that over time create the mix of regulation, market-competition and autonomy within which a particular system of higher education must operate. Policy decisions reflect a political culture and traditions that jointly determine whether elected officials believe they can and should influence higher education performance. These traditions also establish the relative authority of federal and state governments and within each, the role of the executive and legislative branches and the constitutional status of institutions. Policy environments are set in specific social, geographic, economic and demographic contexts. The political culture affects all government agencies and service providers.

**FIGURE 1: A Schematic Model Linking Policy to Performance**




We grouped policy decisions specifically focused on higher education under the heading "rules of the game." The rules of the game are the principal means governments use to influence processes and outcomes in higher education. Rules may be formal and explicit or informal and unstated. They are created over time to reflect the particular combination of regulation and autonomy a state uses in governing its higher education system.[6] We disaggregated rules of the game into two components: system design, and fiscal policy. These categories incorporate variables similar to those suggested by Grindle in her studies of crisis and innovation in Latin America and Africa,[7] as well as our own work on the design of state higher education systems in the U.S.[8]

- *System Design* includes the number and type of service providers; the missions assigned to each; the characteristics and powers of agencies in the interface between government and providers; the information systems that collect, organize and report data essential to understand and influence performance; available technology and its uses, and the role assigned to the private sector;
- *Fiscal Strategies* include the amount of operating support and the regulations that apply to its distribution, institutional autonomy in determining capital needs and in securing funding, the amount and use of incentive funding, types and amount of student assistance, and tax policy.

- *System behaviors* reflect the impact of rules of the game on institutional leadership, priorities, communication, collaboration, and accountability. Rules of the game may afford higher education professionals considerable freedom to pursue institutional goals or may direct or encourage institutions to pay greater attention to public priorities.
- *Performance* reflects the aggregated outcomes of the individual colleges and universities that form a state system. In the model, performance is estimated in the U.S. by the grades awarded in *Measuring Up 2000* for preparation, affordability, participation, completion, and benefits.[9]

While we pay particular attention in our case reports to changes in the rules of the game that occurred during the past decade, we also discuss earlier changes when these are essential to understanding current performance. Focusing on how changes in the rules of the game influence higher education performance suggests a rich array of questions for a comparative study.

- Do the rules of the game differ systematically in the two countries? If so, what is the effect on performance?
- Are the rules of the game, as well as the interventions aimed at changing them at federal and state levels, complementary or conflicting? Do they tend more toward market mechanisms, providing high competition among providers and high choice for consumers; toward greater state control with correspondingly less choice and competition; or do they leave institutions essentially free to pursue their own priorities under the assumption that resulting choices will reflect the public interest?
- How do differences in policy environments, system designs, and fiscal strategies influence institutional behaviors?
- What performance patterns emerge in relation to the rules of the game each state has created? What possibilities are suggested for alternative rules that might produce more preferred alternatives?

While our study was in progress, the National Center for Public Policy and Higher Education in the U.S. published *Measuring Up 2000: The State-by-State Report Card for Higher Education*. This report gave each U.S. state A–F grades in five categories: preparation, participation, affordability, completion, and benefits. We have chosen to use these five categories with slight modifications as the performance indicators in our study. Definitions for this study are generally consistent with those used by the National Center.

- *Preparation* involves student readiness for postsecondary education based on high school completion, K–12 course taking, and K–12 student achievement.
- *Participation* is the extent to which young adults and working-age adults have the opportunity to enroll in higher education programs in their state.

- *Affordability* refers to the ability of families to pay for higher education, state strategies to promote affordability, and the degree to which students rely on loans to finance their education.
- *Completion* has to do with the number of first-year college and university students who return for their second year and the number who complete their certificate or degree program in a timely manner.
- *Benefits* relate to the economic and civic advantages of having a highly educated population, including the educational attainment of the population, the economic benefits that accrue from having a bachelor's degree, the civic benefits to the state, and the skill level of adults. It also involves the research and development contributions institutions make to economic development.

Estimates of the performance of Mexican systems of higher education were derived, albeit with less confidence and precision than for the U.S. under the rationale that governments should be concerned about these criteria, and that available data for Mexico spoke to all five of these criteria. Performance data for Mexico was organized in the same format as for the U.S.

### *Research Methods*

We conducted interviews and collected documents at the federal level in both the United States and Mexico. We also conducted case studies in four states, two in the U.S. and two in Mexico. In each state, we interviewed a wide range of elected and appointed officials, including legislative and executive staff members, elected representatives, state higher education staff, state and institutional board members, and senior executives at colleges and universities. In addition, we collected documents, reports, and data both in electronic and paper formats.

Researchers took notes during interviews and transcribed them as promptly as possible using software that transforms spoken words directly into text. This approach preserved richness and detail without imposing either the costs of tape transcriptions or the tedium of manual entry. In some instances, interviews were recorded when team members judged this would not affect candor. To improve reliability and to achieve the training mission of the project, we used two or three participant/recorders in many of the interviews and compared their respective transcriptions. We promised no attribution. Whenever possible, we secured electronic versions of documents so that the text could be coded and analyzed in the same way as transcriptions of the interviews.

### *Data Analysis*

All text, including electronic documents, was imported into a software program for development, support, and management of qualitative data analysis.[10] The program also permitted the importation of external documents. Based on a preliminary model of the linkages

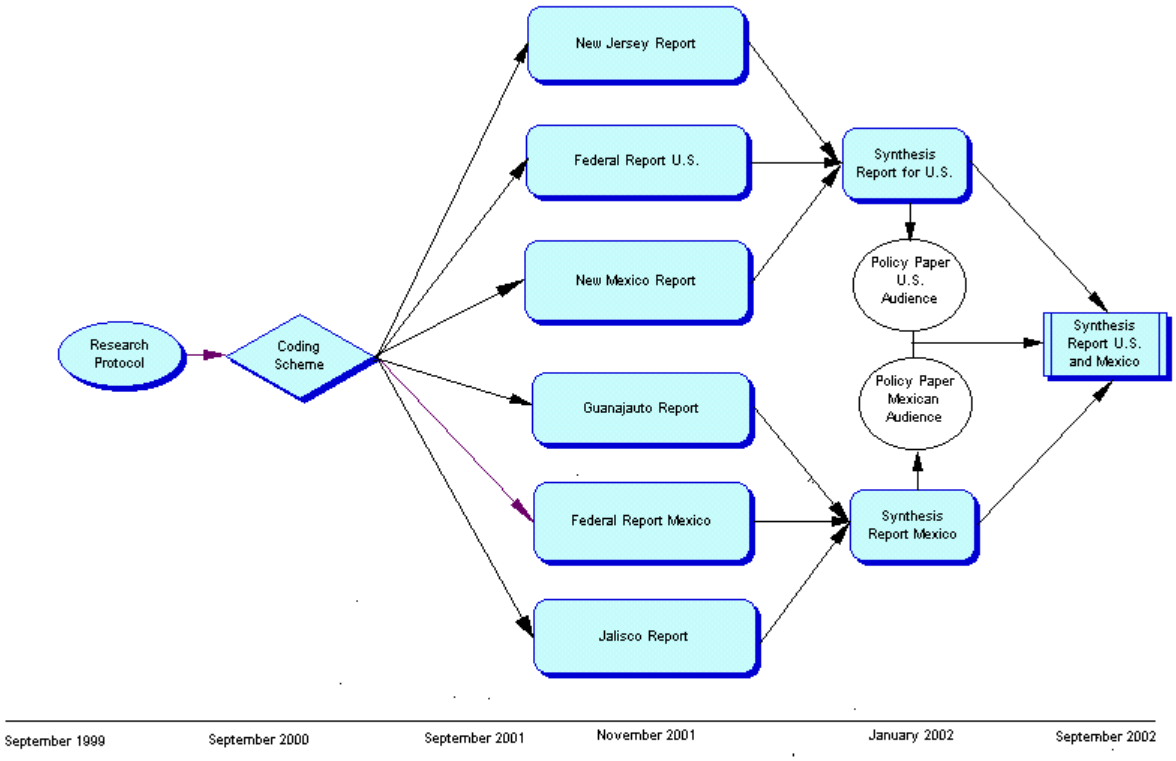
between policy and performance, we created a coding scheme for organizing the data. Researchers in both the U.S. and Mexico used this coding scheme to organize the information presented in the case narratives. Members of the two U.S. teams met regularly to discuss data as these were collected. Minutes of meetings were shared with the Mexican team. The Mexican team organized two data analysis meetings: a one-day meeting to examine and organize federal-level data and a two-day meeting for data on the two states. Data from documents and interviews were examined exhaustively to produce case reports for each state and the two federal settings.

Draft case reports were shared with system participants in each state to be sure they were accurate and complete.[11]. This stage of the project produced six narrative reports, each introduced by a profile describing the combination of regulation, market forces, and institutional autonomy that contributed to the incentives and disincentives characterizing the "rules of the game." Each report provided available evidence about the system's policy environment, rules of the game, system behaviors, and performance. Hypothesized linkages between rules of the game and performance were advanced in the conclusion to each report.

Each national team then wrote a report explaining the performance differences it found in the states studied in terms of differences in policies. The process of writing these reports was used to revise and elaborate the model that appears in Figure 1. The draft reports were shared with state and national representatives of the policy community and became the focus for roundtables during the third year of the project at which the model and its associated propositions were critiqued. Each roundtable[12] produced a policy report designed to disseminate study insights to a broader policy audience. Following the roundtables, research team members rewrote the draft reports explaining performance to take into account the suggestions and criticisms provided by policy leaders.

Following the two meetings, the co-principal investigators for the project met and developed this report summarizing outcomes for both nations, and generating propositions that explained the linkages observed between policies and performance. Figure 2 depicts the documents developed to report each stage of the research with a time-line reflecting completion dates for the major activities.

FIGURE 2: Research Tasks, Reports, and Timelines




## Policy Environments

*Federal policy environment in the U.S.*

In the U.S., state higher education systems share a common federal policy environment characterized by a constitution that is silent on education and an historical context in which fiscal policy has been a predominant strategy for pursuing specific education goals as far back as the Northwest ordinance of 1787. While the national political culture varies depending upon the party in power, over the past quarter century a well-defined trend toward greater emphasis on consumer determination is evident. Concurrently, federal policies have placed increasing emphasis on transparency, accountability, and collaboration across sectors. Within the U.S. federal policy environment, the president is critical to the adoption and funding of new higher education initiatives while Congress negotiates the degree of change acceptable to an essentially conservative political culture. Typically, federal policies make no distinctions between public and private providers of higher education services.

*Federal policy environment in Mexico*

In contrast to the U.S., federal policy in Mexico is quite decisive and there is consequently more to say about it. Throughout the 20th century higher education in Mexico has not existed as a system at the state level. A strong federal government with robust presidential powers overshadowed state governments in educational policy (as well as in most other crucial areas of policy). The traditionally powerful federal Secretary of Education allocated financial resources appropriated by the national congress, thus providing more than 50% of operating funds for public universities and 100% for technical institutes all over the country. The federal Undersecretary for Higher Education sets policy for public universities, whereas the federal Undersecretary for Technical Education does so for federal technical institutes.

The private sector in Mexican higher education is genuinely separate from the public sector in every respect. There is no public funding for private institutions, which have no obligation or incentive to follow governmental directives except for relatively lax regulations for licensing new institutions.

Thus the federal policy environment is paradoxically fragmented by institutional sector and by level of government along several lines:

- Thirty two public universities[13] are chartered by state legislatures but are autonomous and therefore self-governed; they receive part of their subsidy from the state government (usually 50% or less) but most of their funding is federal and they pay special attention to federal incentive programs emanating from the Undersecretary for Higher Education.
- Eighty federal technical institutes are directly subordinated to the federal Undersecretary for Technical Education under a unified national framework for funding, personnel, curriculum and management.
- In keeping with the trend toward decentralization several new universities founded in the 1990s (by federal initiative) have been placed under state supervision; this is also the case with 80 new four-year technical institutes and 40 new two-year technical institutes.
- The rapidly growing private sector (over 800 institutions with more than 30% of national enrollment) is financed by student fees and donations and operates in a virtually deregulated market. An independent accrediting organization services a small but growing sector of private universities. There is no legal distinction between non-profit and for profit institutions.

Federal policy is evidently a crucial point of reference for all public institutions of higher education, but it is not a common policy as technical institutes operate under a different environment from universities. Federal policy also constitutes a relevant setting for state governments that are striving to establish higher education policies locally.

Writing about developing capacities for good government, Grindle (1997,3) recalls an apt quote from the deceased Brazilian intellectual, Guillerme Merquior, that captures the dilemma for government in many developing countries today: "The truth is that [in Brazil] we have simultaneously too much state and too little state". *Too much state* means that "for many

decades interventionist and often intrusive state-led development strategies combined with centralized political control resulted in stagnant economies and authoritarian, corrupt political regimes." *Too little state* implies that "paradoxically these intrusive governments showed little effective capacity to formulate policy, implement it, and perform routine administrative functions." This paradox applies to the Mexican state in the late 1980s as it struggled with prolonged economic crisis and an emergent political crisis derived from decades of centralist but increasingly ineffective one-party rule.

The fact that both federal and state governments are today active in molding the rules of the game for higher education is actually a recent phenomenon. As recently as the 1980s state governments were entirely silent on matters of higher education policy and the federal government's priority was dealing with economic and political issues of much greater magnitude. Throughout the prolonged economic crisis of the 1980s, federal policy makers were mainly focused on reducing inflation, controlling public expenditure and turning the economy around to face the impact of rapid trade liberalization after 1986. Public funding for education decreased in real terms for several years, thus increasing political mobilization and social conflict, a context in which public universities asserted their autonomy vis-à-vis the government and provided a stage for the opposition. As it was severely constrained by lack of resources and a confrontational political climate, the federal government was unable throughout that decade to develop a policy for higher education other than striving to limit the impact of budget cuts and managing conflict. Once the economy turned around in the 1990s and political conflict was dealt with through an increasingly democratic process, the federal government re-asserted itself in the educational policy arena, in recognition of the growing consensus over the centrality of educational development in the context of globalization. In higher education this meant reaffirming a regulatory role with regard to public universities that by reasons of history and political culture were highly autonomous. Thus the last decade stands out in one seemingly trivial but very important respect: the transformation of the role of government from politically negotiating subsidies with institutions to effecting purposeful change in higher education in a very dynamic policy environment.

A decade later, in 2002, the policy environment is in a new transitional situation, influenced by transformations that are taking place in the political system at large. Democratization has led to alternation in power, dislodging the PRI from several state governorships and the federal presidency after seventy years of one-party rule. Different parties may now occupy the executive and legislative branches, leading to a more effective separation of powers (and intensified accountability for the public sector, including higher education). In the decade-long drive to empower state and municipal government, large areas of social policy (health, education and poverty programs) have been decentralized to the state level. Thirty-two state governments today manage significant segments of policy that a decade ago were controlled by the federal government. In this changing policy environment there is a greater number of diverse actors playing on the stage of higher education at both the federal and state levels of government.

***State Policy Environments in the U. S.***

New Jersey grants no public institution special status in its constitution. The governor is as powerful as any in the nation. No community in the state is much more than two hours driving time from the state capitol in Trenton. This combination has encouraged a central planning approach to developing and managing the state system of higher education. New Mexico's governor is also relatively strong. The governor's influence was enhanced during the 1980s by a constitutional amendment removing a provision that effectively limited an incumbent to a single term. While the governor appoints institutional governing boards, their members must come in approximately equal numbers from both major parties. New Mexico is very large geographically and historically among the most diverse of all U.S. states. The state tilts far in the direction of autonomy for its public institutions. With few exceptions, public colleges and universities have each developed more as a consequence of individual leadership and community activism than because of state policy

During the past decade, the New Jersey policy environment has shifted sharply toward greater autonomy, particularly for those segments of the public sector previously subject to the most state control. Aided by a change in party control of both executive and legislative branches, the political culture embraced greater emphasis on consumer choice, a direction quite consistent with federal shifts as well. A watchful legislature and a governor who did not hesitate to increase subsidies to community colleges in the midst of her general efforts to cut direct state support of higher education helped to moderate the consequences of a movement many saw as a dramatic reversal of previous policies. Keeping community colleges affordable in the midst of much talk about a "market-driven" system suggests that those responsible for changing the policy emphasis from regulating to steering[14] kept a watchful eye on the potential impact of these changes on the participation of part-time students, who are not eligible to participate in a generous need-based student assistance program.

During our study, the New Mexico governor's influence on higher education was constrained by a perceived lack of interest and a contentious relationship with a legislature controlled by the opposing party. Even without these constraints, however, "no governor in his right mind," according to a former governor, "would spend much time trying to influence higher education." Despite this bleak assessment, the governor in office during our study strongly supported a non-need based higher education student assistance program funded by a state lottery. The lottery scholarship program, spearheaded by a powerful state legislator, is politically popular. The program's continued appeal has provided momentum to alter the balance between funding institutions and funding students.

New Jersey elected leaders emphasized their view of policy as a tool for improving higher education performance. And they believe that policy affects performance by changing the expectations of those who operate the system. Leaders, while emphasizing the degree of autonomy their institutions enjoy, remain attentive to state goals and priorities. New Mexico's

public four-year institutions are highly autonomous, partly as a consequence of their constitutional status, but also because of a belief that elected officials have little influence over higher education behaviors. In the prevailing view, held both by higher education leaders and elected officials, autonomous university leaders pursue goals dictated by "market forces," rather than state goals or priorities. Policy leaders have experienced little success in establishing statewide priorities for higher education. While state and institutional leaders do agree about the importance of access, such agreement is believed to be largely fortuitous.

***State Policy Environments in Mexico***

The state of Guanajuato is a small province (3.9 million population in 1990) in the center of Mexico that has a growing industrial and urban infrastructure but also high levels of rural poverty as a result of long term decline in agriculture and mining. Trade liberalization in the early 1990s had a heavy impact on traditional industry, but since then new industrial sectors and the service economy have provided new sources of growth. In 1990 it was one of the highest ranking states on the national poverty index (which combines income, educational achievement and living conditions). In 1990 more than 14% of adults were illiterate, especially in the rural areas, which expel significant numbers of migrant workers to the United States.

Jalisco on the west coast is one Mexico's largest states (5.3 million population in 1990). Its relatively industrialized and urbanized economy represents 6% of national GDP and is the third largest economic entity in the country. The capital city, Guadalajara, hosts a good part of Mexico's electrical and computer industry as well as significant investment in chemical industry and food processing. Nonetheless, 84% of its work force is employed by small and mid-sized firms, most of which however are not in the high tech or export markets. In spite of the 1995 financial crisis, Guanajuato's gross per capita income grew 25% in the 1990s and Jalisco's grew 30%. Both states witnessed important shifts in the structure of the higher education system and in demographics, as a result of economic development, urbanization and the extension of higher education beyond the main urban areas.

In the states of Guanajuato and Jalisco throughout the 20$^{th}$ century the public university was the main provider of higher education, although in different proportions in each state: in 1990 the University of Guanajuato enrolled 32% of all students whereas the University of Guadalajara enrolled more than 75%. By the end of the decade, the expansion of private institutions and public technical institutes provided more diversified offerings. Higher education is a growth industry in both states and they have considerable ground to cover yet: the higher education enrollment rates are 11% in Guanajuato and 15% in Jalisco (in contrast to the national average of 18%).

Involvement by state governments in higher education is a recent phenomenon. In the absence of a regulatory role for state government, neither Jalisco nor Guanajuato had promulgated higher education legislation. After the federal decision in 1992 to decentralize education, the role of state governments in regulating basic and higher education increased significantly. Whereas in the past the role of state legislators was limited to approving or amending the statutes of the local public university, in recent years they have become increasingly involved in funding decisions. Issues of fiscal accountability in public institutions have also caught the

attention of legislators. And increased electoral competition in the 1990s is doing away with the "rubber stamp" legislature.

Guanajuato was one of the first states to elect a non-PRI governor in the late 1980s. Three successive administrations run by the center-right National Action Party have consistently moved to strengthen the educational system at all levels, creating policy and planning offices for upper secondary and higher education as well as a state agency for science and technology. Collaboration between political leadership and institutional leaders has been close, making for a positive policy making climate. There is some evidence that an active educational policy has provided some backup for workers and firms affected by trade liberalization. Guanajuato was an example of a state government that focused on education, promoted collaboration among different actors and took advantage of national decentralization trends to develop a higher education policy of its own, as evidenced by the recent publication of an extensive planning document covering the next 25 years.

The relationship between government and higher education in Jalisco is quite different. The University of Guadalajara (the second largest public university in the country with 173 000 students, of which 63% are enrolled in preparatory or upper secondary schools managed by the university) is extremely proud of its autonomy. It has extended university campuses throughout the state and declares that it is the main provider of public higher education in Jalisco. Shortly after being elected in 1994, the first non-PRI governor in Jalisco (also from the National Action Party) released a critical appraisal of higher education in the state, stressing that it is a disjointed system, collaboration and coordination among institutions are almost nonexistent, access is low, and the impact of higher education on economic development is limited. His goals were to develop an integrated statewide policy for an institutionally diverse system of higher education, improve quality and competitiveness through evaluation, increase regional coverage to reduce inequity, and support R&D for economic competitiveness. Some of these goals were met and others were not. The main goal of creating an integrated system of higher education in the state was not accomplished. Because of a confrontational relationship with the University of Guadalajara the federally promoted notion of a state planning commission for higher education never got off the ground. The government did succeed in establishing several technical institutes, thus laying the groundwork for a state managed network of technical institutions. It also launched an office for upper secondary and higher education, which has been able to partially increase coordination of a diverse and disjointed set of upper secondary schools, although the large system of university preparatory schools are managed separately. In spite of the absence of a local accreditation system this office has increased inspection of private institutions. The state government is moving ahead with a policy of its own only in areas not considered by the university to be its turf.

## Rules of the Game

### System-wide trends: the U.S.

While the design of the higher education-federal interface in the U.S. has historically been intentionally vague, the 1990s brought a number of important changes. Direct lending changed the student loan industry by providing competition to commercial lenders. Direct lending also

required new structures in the interface including an office, a new delivery system, and a management structure. And direct lending brought the Department of Education (DOE) into direct contact with students, not a typical relationship. Because of these changes, the 1998 reauthorization created a Performance Based Organization within the DOE dedicated solely to student assistance, highlighting dominant policy themes of the decade including: streamlining, cost saving, and middle-class tax relief.

Fiscal policies are strategies of choice for federal efforts to influence higher education goals and priorities. The fiscal rules of the game at the federal level have changed during the past decade. While most federal funds continue to be awarded to students on the basis of need, there is now less emphasis on need-based grants and more on subsidized loans. While low income and underserved populations remain a federal concern, the middle class has been the focus of most new initiatives. Students and families must have substantial income to benefit from federal tax incentives for college participation. Federal changes in fiscal policy have been better aligned with the policies of high aid, high tuition states such as New Jersey than low aid, low tuition states. Perhaps in recognition of this reality, policy makers in New Mexico, while retaining a low tuition access strategy, have significantly increased their commitment to financial assistance to the point where New Mexico now ranks 10$^{th}$ in the nation in the total amount of need-based and merit aid provided per resident to undergraduates.

**System-wide trends: Mexico**

The 1990s marked a very clear departure from the past not only in terms of specific policy programs and instruments but also in terms of values. In contrast to the stance of "benign neglect" in the 1980s, there was an unambiguous swing toward increased policy intervention in higher education, moving away from continuous negotiation under conditions of quasi permanent conflict to a set of relatively stable and legitimate rules, formally associated with a discourse of quality and efficiency. Policy during the 1990s created rules where there were none. This may seem too drastic, since there are always rules of some kind – written or unwritten, political or financial – in the game between government and publicly funded higher education. However, it is a fairly exact statement if we assume that rules of the game apply to *educational* goals and values rather than to merely the Hobbesian give and take that prevailed in Mexican public higher education during the 1980s.

Underlying this change was the belief that as guardians of the public interest the federal and state governments were under the obligation to induce and improve educational quality and relevance. The previous consensus over means and ends in higher education had eroded. Its basic tenets had been: growth, and increased access was the overriding goal. The federal government was considered the main funding agent and regulator of the system; higher education was assumed to be publicly funded in its entirety, secular, and free of charge to students. By the same token, institutions were ideally fully autonomous and government intervention minimal. This set of beliefs was superseded by a growing recognition that the crisis of quality in public and private institutions was caused by: ambiguous funding criteria, inadequate or nonexistent information systems in government and institutions, the absence of accountability mechanisms and evaluation for quality improvement, politicization in universities and lack of innovation in technical institutes.

*The push for evaluation and quality control*

Quality improvement and control, institutional diversification, planning and information systems, and incentive funding became the main tenets of federal policy after 1989. Initially evaluation was the principal watchword, and various evaluation mechanisms were set up with impressive speed against university opposition: external peer review of undergraduate and graduate programs, evaluation of individual professors, entrance examinations for students, certification exams for certain professions, and accreditation (initially for only part of the private sector and increasingly for wider sectors).

*A new funding policy*

Hand in hand with evaluation, changes in funding were another crucial piece of changing federal policy. By the end of the 1980s, the main source of funding for public universities and technical institutes were direct federal lump-sum subsidies, which usually resulted from yearly political negotiations with rectors. Funding for special projects, scholarships or good performance was non-existent. Few universities charged fees or tuition, nor were they in the habit of selling services to the business community. Federal officials did not require institutions to produce performance data or indicators. Being totally dependent on one outside source of income, universities were faced with a tough dilemma when macroeconomic adjustment policies after 1984 led the federal government to cut spending in all areas. Real income for public higher education had decreased by about 30% by the end of the decade. Since very few institutions had the entrepreneurial capabilities to develop new sources of income, stagnation and conflict became the norm (Martínez, 1994). Dissatisfied with the politically negotiated subsidies of the past, federal policy makers sought for ways to create some order in a chaotic financial situation

According to one official, a first step in the early 1990s was decoupling subsidies from student enrollments as reported by rectors (often using unsubstantiated data) and linking them with the number and level of faculty appointments based on verifiable personnel information. This must be qualified: there is continual debate over the ambiguity of allocation criteria and the federal government has not actually made public the rules used in determining subsidies; a recent study found a high correlation between federal subsidies with enrollments and graduation rates and only secondarily with the number and quality of faculty.[15] As the incentive to expand (and on occasion to misreport enrollment data) faded, universities entered a decade-long phase of stable enrollments and the stage was set for the expansion of public technical institutes and most especially the private sector, which absorbed the major part of increasing student demand in the 1990s. Further consequences of the decision to link subsidies to academic personnel included direct governmental scrutiny of hiring and promotions within each institution and the obligation for universities to produce valid data on personnel. Strict federal control over personnel decisions constitutes an important shift toward greater regulation.

The initial goal of the new funding policy was to improve the basic inputs of universities suffering from eight years of budget cuts. Special funds for development projects were made available to institutions through a review process that examines the viability of project

proposals. Most of these funds have gone into installing and upgrading computing infrastructure, internet capability, libraries, laboratories, and in some cases development of new programs.

A second goal in improving quality was to upgrade faculty, on the assumption that a decade of substandard hiring and promotion practices had created a serious problem for educational quality. Although the base value of academic salaries was not significantly increased throughout the decade, individual performance grants were made available to full-time professors through a peer review process designed and managed at the institutional level. Researchers may compete for performance grants from the National System of Researchers (SNI). These grants are renewable on an annual basis (or tri-annually for SNI) and do not accrue to pension funds, thus lowering the overall cost to the federal government. For a significant portion of full-time professors and researchers, non-salary income now comprises between 30% and 50% of the total. Rectors are bypassed in both instances, although in the case of productivity grants they often wield influence in the local review process for professors. Funding was also made available on a competitive basis for professors to pursue or finish graduate studies through the Program for the Improvement of Faculty (PROMEP), a mainstay of federal funding policy throughout the 1990s. Universities and departments learned that to compete for project funds they had to design faculty development plans for the medium term.

Universities were also asked to raise fees and tuition and to raise additional income from other sources. No updated data are available, but it is safe to say that on average fees and tuition were raised from nominal values (often insufficient to cover the administrative cost of charging them) to somewhere between US$1,000 to US$2,000 a year.[16]

The National Science Council (CONACYT) increased project funding through competitive peer review and created funds for postgraduate programs focusing on training scientists. Funds were also generated to induce Mexican scientists living abroad to relocate in Mexican universities. CONACYT has been less successful in inducing industry to increase private funding for research in any significant way.

In sum, there has been a shift toward differentiated sources of funding and increased competition in a context of enlarged regulation. This has led to a growing need for information on costs and institutional productivity. Full disclosure by institutions has not become a widespread habit, perhaps because in contrast to the United States there is no legislation requiring disclosure by recipients of federal funds. The taboo surrounding student fees in most public institutions was overcome, setting the stage for public debate on how much should be paid for a growing system of higher education, by whom, and how. A significant change in the politics of higher education finance has resulted from increased pluralism and separation of powers in the political system: rectors now lobby state and federal legislators directly often bypassing federal policymakers

Several critical issues remain unattended or have emerged:

- Unclear criteria for institutional allocations: both policymakers and institutional leaders express dissatisfaction with the ambiguities surrounding subsidies; there has been an

ongoing debate over since 1998 over a funding formula for universities but the federal Undersecretary for Higher Education and the rectors' association have been unable to reach an agreement; the educational planning document released by the Fox administration promises to resolve this issue by 2004.

- Centralization of funding: most funding is federally supported and on average states contribute about 20% of institutional income. All special funds created in the 1990s are federally financed. There is a trend toward collaborative federal-state financing of the new decentralized Technical Institutes, but the centralized tax structure places limits on state contributions.

- The level of funding: Mexican expenditure in higher education is below the OECD average: 4,519 US$ a year per student in the public sector compared to OECD country mean of 8,601 US$ (data for 1998, OECD, 2000) This would seem to justify the continuous complaints of institutional leaders. Policymakers reply that public spending in education has been inequitable: in 1993 Mexico spent six times more for a student in higher education than for a student in basic education (the OECD average was a ratio of 2.5:1). In line with recommendations from organizations such as the World Bank, between 1994 and 1999, public expenditure per student in basic education had increased by 14.6% whereas in higher education it dropped by 46.3% in real terms. By 1999, 72.2% of the federal education budget went to basic education, 9.9% to upper secondary, and 17.7% to higher education (Observatorio, N°2, 1999). This tendency seems to be coming to its end: a goal of the Fox administration (2000-2006) is enrollment expansion and quality improvement in higher education, and demographic shifts are reducing the demand for primary schooling.

*Changes in system design*

Institutional diversification is one of the notable changes occurring over the past decade. While keeping enrollments at public universities in check, federal policymakers collaborated with state governments to create more than 80 new four-year and 40 two-year technical institutes at the state level. This represented a significant departure from centralized practices of the past and from the four-year model of professional education: it is only in the 1990s that Mexico has introduced Level 5 (two-year postsecondary) institutions. Private sector expansion has been very significant in almost all states, taking up more than 30% of national enrollments in over 1,000 institutions. Since the late 1990s several new public universities have been established, once again through collaborative agreements between federal and state authorities and at the behest of the latter.

Vertical differentiation was also an important trend. The National Science Council promoted the establishment of 34 specialized research and postgraduate institutes throughout the country. It also emphasized the need for high quality master's and PhD programs to train the next generation of scientists and academics. This policy lined up with program for faculty upgrading and the growing demand for in service training and upgrading by in service professionals. Graduate studies have expanded considerably in this period.

Increased institutional diversity and fragmented governmental authority continue to pose serious issues of system coordination. The long-term strategy has been to deepen decentralization such that in the future higher education in Mexico would consist of 32 state systems[17]. In addition to placing decisions to create new institutions in the lap of state governments, federal policy has taken other steps in this direction, such as promoting the establishment of state planning commissions for higher education and delivering federal funds for the national scholarship program (initiated by the Fox administration in 2001) for allocation by state governments. Emerging issues along these lines include devolving federal technical institutes to the states, improving policy making capacity and expertise at the state level, and reforming the centralized fiscal structure at the federal level (most tax income flows to the federal government; national legislators assign the federal education budget, including transfers to states and institutions).

**State System Design in the U.S.**

Public higher education in New Jersey is for the most part a centrally planned creation of the last half of the 20th century. Beginning with the acquisition of previously private Rutgers University in the mid '50s, the state developed a comprehensive public system of research universities comprehensive universities and community colleges either by founding new institutions or converting and expanding pre-existing ones. Among the new institutions was a college-without-walls serving a statewide mission. Most of this development was guided by the firm hand of a strong board of higher education, the chancellor of which served as a member of the governor's cabinet.

In contrast, there is little evidence of central planning in the design of New Mexico's system of higher education. Six public four-year institutions operate under the supervision of independent boards. Three of the six operate branch campuses and two have off-campus instruction centers as well. Nine two-year institutions have widely varying histories and current governance arrangements. Two were established in the state constitution and operate under boards without taxing authority appointed by the governor. Three community colleges are converted vocational-technical institutions, each with locally elected boards.

The New Mexico Commission on Higher Education appears stronger on paper than it does in operation. Elected leaders often interact with institutions as they did before the Commission's authority was expanded and strengthened. There are few staff members for the extensive responsibilities assigned. During our study, divisions among board members further limited staff influence. Previously titled the Board of Educational Finance, the Commission's fiscal authority remains stronger than its planning, articulation or program review functions. Associations or councils representing public two-year and four-year sectors and a small private sector also operate in the interface between state government and higher education providers.

The New Jersey Commission on Higher Education is a significantly diminished successor to the powerful Board of Higher Education it replaced in 1994. The Executive Director does not enjoy cabinet status. And the Commission must share many of its responsibilities with newly strengthened institutional governing boards and a Council composed of the presidents of all of the state's public and private colleges and universities. Statutory councils for the state colleges

and universities and for community colleges keep a watchful eye on statewide activities affecting higher education. While the New Mexico Commission appears stronger than its New Jersey counterpart, differences in modes of operation appear to be more a function of differing approaches to leadership by the two executive officers than any real difference in operating authority. Both Commissions must stay constantly alert to intrusions into their legitimate functions by state government or higher education representatives.

New Jersey has an excellent information system. The New Mexico system is somewhat less credible because of incompatibilities with university systems. Staffing limitations prevent either system from taking full advantage of capabilities. Both agencies are viewed as reliable sources of relatively unbiased information, although neither state makes policy decisions primarily on the basis of information provided by its respective commission.

New Jersey has invested significantly in technology to improve the research capacity of its universities, to adapt an information system that provides articulation information for perspective transfer students, and to enhance instruction including distance learning. New Mexico has been much less willing to make similar investments, providing only a small appropriation to its commission for distribution largely in terms of priorities defined by individual institutions. New Mexico colleges and universities have not been responsive to collaborative approaches to distance education. The few existing independent efforts in distance education may suggest philosophical differences about the need for distance education as well as a lack of state incentives.

The two states have quite different approaches to the use of independent colleges and universities. Such institutions dominated higher education in New Jersey from colonial days into the 1950s. The independent sector now functions as a full partner in providing state higher education services. A very small private sector has never been a major factor in state thinking about how best to deliver higher education services in New Mexico.

**State System Design in Mexico**

Both Guanajuato and Jalisco have experienced institutional diversification with growth in the public technical institutes and especially in the private sector. Between 1994 and 2000 Guanajuato created two four-year technical institutes and three two-year technical institutes, which were set up in areas that lacked higher education providers. In the private sector, eighteen new institutions were established: eleven are small institutions offering courses in areas such as business and accounting, and six are regional campuses of large private universities (such as the Technological Institute of Monterrey). Private sector enrollments doubled to more than 16,000 students over the 1990s. On the other hand, the University of Guanajuato retained its identity as one of the smaller public universities, with enrollments of 7,000 in 1999. Total enrollments in the state grew from almost 18,000 to slightly more than 33,000 in ten years, and most of this growth was in the private sector which today covers almost 50%. Guanajuato has four specialized research centers funded by the federal government through the national science council (CONACYT) and partially by the state council for science and technology.

Jalisco followed a similar pattern of diversification, although the role of the public university is quite different in this state. The establishment of small private colleges blossomed, reaching 20 institutions enrolling more than 11,000 students in 2000. Regional campuses of large private universities also grew from four to seven campuses with more than 10,000 students. Most of the new private establishments were set up in the capital city of Guadalajara, which was already served by numerous higher education providers. The state government created five four-year technical institutes and three two-year establishments in smaller cities, and the University of Guadalajara extended its reach through nine new regional campuses distributed throughout the state. The state university enrolls 64,000 students at the undergraduate and graduate levels as well as 101,000 preparatory school students: it enrolls half of all preparatory and university students in the state. In both states the trend is toward rapid private sector expansion in the large urban centers and publicly supported technical institutes in the outlying regions. In Guanajuato the state university covers 20% of enrollments in accordance with the state planning commission. On the other hand the University of Guadalajara follows its own policy of regional expansion and strives to maintain a strong presence in the face of growing diversification covering 50% of enrollments. An important shift has taken place in the regional distribution of higher education within the state of Jalisco: enrollments outside Guadalajara went from 4.4% of the total in 1990 to 30% ten years later. Guanajuato has always distributed higher education provision widely, and today 89% of enrollments are registered outside the capital city[18].

Although both state governments recognize the importance of distance education and the introduction of information technology to higher education, neither one has taken firm practical steps in this direction. Since states have limited funds for this purpose, it is usually the federal government that supports ICT infrastructure development. The provision of distance education is a decision made by specific institutions: it is provided on a very limited scale by the University of Guadalajara, and the main provider of distance education in Mexico – the Monterrey Technical Institute – operates in both states but not as a result of state policy.

***State Fiscal Policy in the U.S.***

New Jersey and New Mexico follow very different strategies in the ways they allocate and distribute state dollars for operating purposes. In FY 2001, New Mexico ranked second among all states with its higher education appropriation of $14.80 per $1000 of personal income. New Jersey ranked 44th appropriating $5.68 per $1000. The undergraduate tuition and required fees at flagship universities in the two states were very different as well, $6,333 in New Jersey and $2795 in New Mexico.[19] When revenues from all sources are considered, New Mexico public institutions cost more per full-time student ($18,088 in 1998) than their New Jersey counterparts ($16,410). For 1998, tuition and fees covered 55.1% of that total in New Jersey compared with 22.7% for New Mexico.[20]

More than a decade ago, New Jersey decoupled operating support from student enrollments for its public comprehensive and research universities. There is no formula and increases are determined by applying a percentage to what each institution received the previous year. Independent institutions receive state operating dollars as well. For them and for community colleges, there is an enrollment-driven formula. Individual governing boards determine tuition

levels in all four sectors. While the governor and the legislature make public statements about the importance of keeping tuition increases low - and during our study provided extra operating support to community colleges and one comprehensive university to help them keep tuition charges as low as possible - no state agency intervened in the authority of any board to set tuition. Actual tuition charges varied widely even among institutions within the same sector. Performance funding was adopted to anticipate some of the potential problems with allowing tuition to vary as a function of market demand. Although the amount involved in performance funding was relatively small, the Commission was charged with reporting publicly on institutional success in earning available dollars. Public reports provided an incentive for institutions to make a reasonable effort to achieve underlying goals.

New Mexico uses enrollment driven formulas to allocate operating dollars to all of its public colleges and universities. Institutional representatives consult with the Commission about formula revisions. Changes typically require substantial consensus. While new legislation to enforce accountability will take effect in 2003, the act does not specify guidelines for performance indicators. Nor has there been any indication from the state as to which priorities or problem areas have to be addressed by any given agency. Even so, the legislation is perceived to have influenced the activity of individual institutions and the community colleges and universities as an enterprise. Policy makers remain somewhat skeptical about the results of this activity, but most acknowledge that higher education is further along on accountability measures than other state agencies.

Direct appropriations to public colleges and universities for capital outlay have been very meager in New Jersey during the past decade. Capital planning is now decentralized with primary responsibility invested in institutional governing boards. Restructuring eliminated the central oversight role played by the former Board of Higher Education. The 45 public and private institutions eligible for state grant programs select their own priorities with or without up-to-date facilities plans. The New Jersey Commission's role is limited to ensuring that proposals submitted under five of the state's debt financed programs are consistent with legislative intent. In the absence of direct state appropriations or available debt service funds, public institutions may arrange their own capital funding by pledging student fees for debt service.

In New Mexico, public institutions submit a list of priority projects. The New Mexico Commission reviews all lists and assigns priorities to projects from a statewide perspective. The Commission's recommendation is passed on to the legislature and the governor's office, and by most accounts; this list provides valuable guidance to policymakers. Despite this process, however, institutions approach the legislature individually for capital funds and special projects. Universities employ lobbyists to communicate their priorities and advocate for funds in addition to working through their Council of University Presidents. Community colleges lobby the legislature as one body as well.

Incentive grant programs are an important ongoing strategy in New Jersey for achieving state priorities. The Commission recommends initiatives to the governor and the legislature, and administers those that are funded. Colleges and universities are not fond of incentive grant programs both because they believe the state should be providing more operating dollars and

because incentive grants involve more oversight from the Commission than institutions willingly accept. During the past five years, the state has used incentive grants to improve transfer and graduation rates for minority and low- income students, to enhance technology and workforce preparation, and to improve university research in biomedical and other high-tech areas. A significant teacher preparation and development initiative was also pending at the time of our study.

New Mexico has rarely made use of incentive grants. A onetime legislative appropriation for distance education may illustrate why. Colleges were asked to forward proposals to the Commission outlining how they would use the money they received. The primary criterion in the guidelines, collaboration, was largely ignored. As in New Jersey, New Mexico institutions prefer to receive state funds without strings.

New Jersey administers one of the most extensive need-based, student assistance programs in the nation. The state also offers educational opportunity fund grants to students with exceptional need and educationally disadvantaged backgrounds, and state scholarships, awarded on the basis of academic merit. Student aid funds now approach 20 percent of the total state appropriation for higher education. As part of the 1994 restructuring, the state transferred responsibility for administering student aid to a separate, fully integrated administrative agency with responsibilities for coordinating aid programs, advancing policy recommendations to state government, leveraging state and federal resources, and providing direct services to students. Removing restrictions on the authority of governing boards to increase tuition has allowed public colleges and universities to compete with private institutions for a larger share of student aid funding.

New Mexico also places significant emphasis on student assistance as an access strategy. When both need-based and merit aid are combined, the state is only three places behind 7$^{th}$ ranked New Jersey, somewhat surprising given that New Mexico also emphasizes low tuition. The newest and largest program, the lottery success scholarship, was started in 1996. The program pays up to 100 percent of the tuition at any in-state public college or university for any full-time student who meets relatively modest academic criteria, regardless of income. Students attending private institutions are eligible for a $3000 student choice scholarship—but not lottery scholarships. New Mexico leaders believe that the lottery scholarship program has increased access to higher education. Data indicate that enrollments have increased and the distribution of students among public institutions has changed. Choices for eligible students among public institutions are no longer influenced by tuition differences.

***State Fiscal Policy in Mexico***

Although until very recently the only financial role of states in higher education was partial funding of the public university (anywhere from 20% to 50%), the financial contribution by states has increased and diversified in the 1990s. In 1990 the government of Guanajuato contributed 32% of the state university's subsidy. Today it not only continues this subsidy (34% in 2000) but also provides 50% of the income of five technical institutes. The government is also beginning to support infrastructure development at the federal technical institutes on a 50/50 basis with the federal government. Guanajuato was one of the few states to set up a

scholarship and loan fund for students living in depressed areas, and it now participates in the National Scholarship Fund (created in 2001) contributing one peso for every federal peso in the fund (the so-called "peso by peso" program). A fascinating development in Guanajuato is the growing participation of municipal governments in supporting students at the local technical institute: the state set up a "peso by peso" scholarship fund with municipal authorities in ten small urban areas. The state science council provides financial support to local R&D projects in public and private higher education and firms. Between 1990 and 2000 the state funding for higher education increased from 6.2 million dollars to 22.7 million dollars, a 266% increase.

In Jalisco state expenditures for higher education increased 42% from 84 million dollars in 1994 to 119 million dollars in 2000, at which time educational expenditures at all levels represented half of the state budget. Subsidies to the University of Guadalajara were kept at roughly the same amount as the federal contribution, Jalisco being one of the few states that provide 50% of the public university's income. In 2000 the state subsidy for the university represented 98% of all state expenditures for higher education. By that time five technical institutes were operating in Jalisco under the "peso by peso" program with the federal government. They are small institutions and take up a small part of the budget, but the technical sector is set to grow and hence the higher education budget will have to expand as well. The contrast with Guanajuato is clear: not only did spending grow at a slower rate in Jalisco but the vast majority of available funds continue to be allocated to the state university, thus surely limiting this state's options for other types of support.

## System Behaviors

### *In the U.S.*

Congressional actions during the past decade have significantly altered the behaviors expected from institutions remaining eligible or competitive for federal funding. Increasingly, reporting requirements have been tied to legislation. At the beginning of the decade, higher education was not regulated in such areas as student loan default rates, the costs associated with college, graduation rates of students and student athletes, pass rates of teachers on state licensure examinations, campus crime, or hate crime. By 2000, colleges had to report information and comply with regulations in all of these areas. The federal government has also placed new emphasis on collaboration across institutions and sectors through criteria that require partnerships and consortia to qualify for such programs as GEAR UP and Tech Prep. Accountability was also a prominent federal theme as evidenced in default rate triggers, information disclosure requirements, and mechanisms capping indirect cost rates for research grants.

### *In Mexico*

The behaviors of Mexican institutions throughout the decade were altered in several respects. One of them was the disappearance of political pressures and street mobilizations by universities in search of funds (although the two largest universities, UNAM and the University of Guadalajara, continue to believe that benefits are to be derived from this kind of behavior).

Another important shift was the introduction of the discourse on quality, evaluation and accountability. This did not occur painlessly. Institutional leadership and most especially the rectors' association as the crucial mediating body have played an important role in legitimizing federal policy and providing a meeting ground for government officials and institutions to address these issues gradually. The progression of evaluation has been relatively disjointed and uneven in different institutions: some carry out evaluations as a matter of mission and values, but other may be responding to financial incentives that are on occasion coupled with evaluation. As a matter of policy, most evaluation results are not disclosed unless institutional leadership decides to make them public (as is the case with the results of university entrance exams applied by the National Center for Evaluation). Therefore its impact on quality improvement is not self-evident and tracking educational progress is problematical. There is some evidence that on occasion institutions, departments or academics go through the motions in order to report that evaluations were carried out but further steps in to improve quality are not necessarily taken. Undoubtedly numerous institutions and programs do take evaluation seriously and endeavor to improve their operations, but it is not a system-wide trend. Thus, an old issue in Mexican higher education continues to be unresolved: the uneven quality of institutions and programs and the relative lack of information on quality for the consumer and the funding agent.

Financial audits have become the norm for public institutions, as a result of the general demand for greater transparency in the political system and public administration. Federally supported universities and institutes are now required by law to provide accurate budgetary information and to submit to at least one audit yearly.

Accreditation was initiated in the mid-1990s by the federation of private universities, FIMPES, because of concern over low levels of quality in the rapidly expanding sector of small private establishments. Some of the larger private universities also accredit with the Southern Association of Colleges and Schools in the U.S. Of the more than 1,000 private establishments in Mexico, however, only about 15% are accredited by FIMPES. Toward the end of the decade, accreditation gathered steam within the rectors' association, which developed a proposal for the public sector. The Fox administration has taken it up and in 2001 a national accreditation council was formed.

Public institutions have diversified their sources of income beyond the federal subsidy through student fees, the sale of educational services to professionals and firms, and applied research. Since data is available on an institution-by-institution basis, it is difficult to estimate how widespread this trend may be. What seems certain is that the academically stronger universities with a firm research base and sound departments in engineering and the natural sciences are more successful in the search for additional income than institutions and that very few institutions are able to produce more than 10% of their income in this way.

***State System Behaviors in the U.S.***

New Jersey actions during the past decade have also had an impact on communication, collaboration and accountability even as the state moved away from regulating and central

planning. The Commission is heavily involved in "bench marking," a process used to track system performance through comparing national and state indicators. Public institutions publish annual accountability reports. The Commission prescribes the format for these reports and publishes its own accountability report for the system. Performance information is used to allocate some state funds, and the Commission publishes a report on criteria and institutional success in meeting them.

New Mexico passed accountability legislation that will take effect in 2003, but there are no exact guidelines for performance indicators or any direction about the priorities or problem areas to be addressed. Public higher education institutions, through their respective sector organizations, have taken leadership in addressing accountability legislation, but policymakers are skeptical about probable outcomes while remaining hopeful that overtime better information about institutional strengths and weaknesses will emerge. New Mexico has a student information system, but the reports generated from it are mostly descriptive. Universities use their own sources and databases to produce informational reports that may differ from those produced by the Commission. Most "cutting-edge" comparative reports on higher education are produced by outside consultants.

Collaboration in New Jersey has clearly improved since the 1994 restructuring. Much of this change seems attributable to the creation of a Presidents' Council that brought together chief executive officers from two- year and four-year, public and private colleges and universities. Council responsibilities were defined to require close collaboration with the Commission. Presidents and Commission staff needed several years of experience before they learned how to use the Council/Commission structure to best advantage. Presidents now report closer working relationships with their counterparts in institutions across the system.The increased emphasis on self-regulation for community colleges and state colleges and universities explicit in the restructuring has, according to those we interviewed, produced different and more entrepreneurial presidential leaders.

Collaboration in New Mexico has also increased over the last five years. Any movement in this direction is noteworthy given the relative absence of collaboration between sectors in the past. The best-case scenario for collaboration in New Mexico, according to higher education leaders, would involve a forum where politically and geographically autonomous institutions would collectively conceive of solutions to prominent problems.

Community colleges, the closest sector in New Mexico to anything that might reasonably be described as a system, formed an association and hired an executive director in the early 1990s. The association has had enough success in providing a link to state government (measured in part by increased legislative appropriations), keeping community colleges visible, and working on such issues as accountability that the universities formed the Council of University Presidents. This Council adopted priorities for the 1990s including accountability, teacher quality, and economic impact. While the two organizations remain in the minds of many a strategic tool for competing more effectively for state resources, their capacity for facilitating dialog across sectors and with state level officials is also recognized.

The Commission and the State Board of Education have also begun to build a stronger relationship through collaborating on roundtables and statewide meetings. This represents a significant change for a state where professional autonomy has been historically the defining feature of higher education.

### *State System Behaviors in Mexico*

In Guanajuato, collaboration between the government and the higher education institutions laid the groundwork for a successful state planning commission (COEPES), following federal guidelines. The commission received full endorsement by the governor (an ex-rector of the state university) and proceeded to establish itself legally as an independent organization. This process of institutionalization boosted the legitimacy of the commission paving the way for incorporating representatives from all institutional sectors and for a relatively smooth operation. The commission has produced a 25 year plan for higher education. It publishes data on higher education and is developing a series of performance indicators. The commission is also moving ahead with the critical issue of inspecting private institutions and reforming criteria for authorizing new establishments in this rapidly growing sector. The state government also created a council for science and technology (CONCYTEG) to promote collaboration between higher education and business and to fund applied research.

The story of the state planning commission in Jalisco is quite different, as it has been a bone of contention between the government's attempt to integrate the higher education system under a single authority and the University of Guadalajara's defense of its autonomous state-wide campus network as a separate entity based on the belief that the university is responsible for public higher education in the state. The commission was created on paper but never got off the ground and for all practical purposes collaboration between the government and the university is non-existent in Jalisco, although communication and collaboration among the technical institutes has improved in response to the leadership of state policymakers. There is no state-wide information system in Jalisco, such as the system that Guanajuato is building. Jalisco did create a science and technology council with the mission of promoting university-business partnerships for R&D, although its infrastructure and personnel are limited and it has no funds of its own to support research.

The balance between autonomy and regulation has shifted. In the past, universities were highly sensitive over autonomy and governments generally sidestepped this touchy political issue. Throughout the 1990s federal policy grew more "intrusive" toward autonomous universities with increased demands for financial reporting and accountability and closely monitored central management of academic personnel. Federal funding programs now require detailed planning at the department level. The reduction in procedural autonomy does not seem to affect autonomy on substantive academic matters. However, intervening in the improvement of internal governance does seem to be an implicit policy goal and several state universities (including Guadalajara) have restructured their management systems. Autonomy was not an obstacle for the collaborative governmental relationship of the university of Guanajuato, which paved the way for a successful state planning committee; this contrasts with the difficult interaction between the University of Guadalajara and the Jalisco government.

The question of autonomy and regulation presents a different picture in the case of federal technical institutes: it is clear that over-regulation and centralized federal control of all substantive and procedural matters dampens entrepreneurial behavior and places institutional administrators outside the reach of state policy makers. The rapidly growing numbers of two- and four-year technical institutes at the state level are freed from centralized regulation by the federal government[21] and entrepreneurial leadership in several technical institutes in Guanajuato has produced partnerships with business.

But the new state-run institutes now face important governance issues locally: will the governor appoint their leadership and faculty under consultation? Concern was expressed over the possibility of political appointees to these institutions.

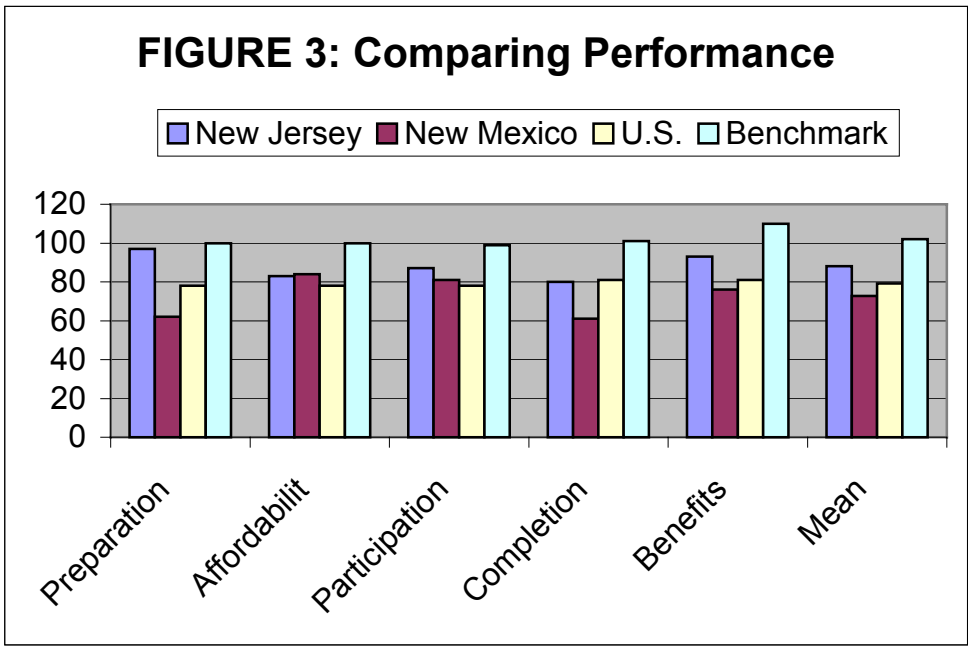
## Comparing Performance

To assess performance, we chose with slight modifications to use the five categories developed by the National Center for Public Policy and Higher Education in the U.S. and reported in *Measuring Up 2000: The State- by-State Report Card for Higher Education*. This report gave each U.S. state A–F grades in five categories: preparation, affordability, participation, completion, and benefits. While some higher education professionals have criticized these indicators, no one has proposed a better alternative that can be assessed at present using available data. Definitions for this study are generally consistent with those used by the National Center.

- *Preparation* involves student readiness for postsecondary education based on high school completion, K–12 courses, and K–12 student achievement.
- *Affordability* refers to the ability of families to pay for higher education, state strategies to promote affordability, and the degree to which students rely on loans to finance their education
- *Participation* is the extent to which young adults and working-age adults have the opportunity to enroll in higher education programs in their state. .
- *Completion* has to do with the number of first-year college and university students who return for their second year and the number who complete their certificate or degree program in a timely manner.
- *Benefits* relate to the economic and civic advantages of having a highly educated population, including the educational attainment of the population, the economic benefits that accrue from having a bachelor's degree, the civic benefits to the state, and the skill level of adults. It also involves the research and development contributions institutions make to economic development.

***Performance in the U.S. States***

Figure 3 compares the performance of New Jersey, New Mexico, a benchmark state, and the U.S. average for all states. Benchmark states, as defined by the NCCPHE, are the five best-performing states in each category. The U.S. average was calculated as the weighted mean of category index scores for all 50 states. Mean scores in the last column of the figure reflect average performance for all five grading categories.[22]




New Jersey outperforms New Mexico on four of the five performance categories and is above the U.S. average for all five categories. Overall, New Jersey ties with Illinois as one of the two top performing higher education systems in the nation.

***Performance in the Mexican States***

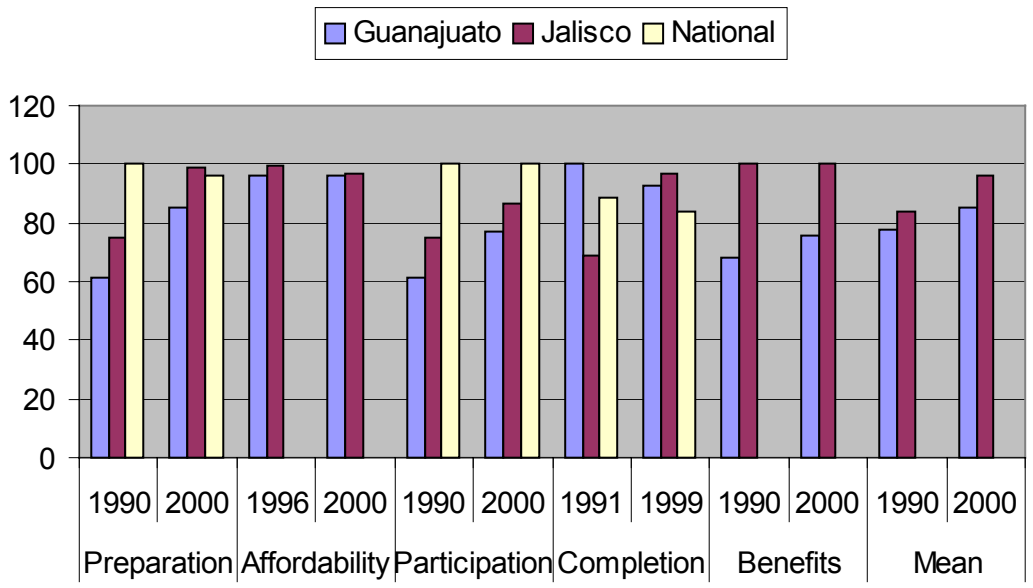
Data on performance in Mexican higher education is much less complete than in the U.S. and there is no equivalent to *The State- by-State Report Card for Higher Education*. We have therefore adapted the definitions of performance indicators to the type of information available:

- *Preparation*: upper secondary school completion.
- *Affordability*: the ability of families to pay for higher education

- *Participation*: the extent to which young adults and working-age adults have the opportunity to enroll in higher education programs in their state. .
- *Completion*: the number who complete their certificate or degree program in a timely manner.
- *Benefits*: the economic and civic advantages of having a highly educated population, including the educational attainment of the population and the civic benefits to the state.

In the absence of a *Report Card*, we gauge performance in terms of *changes in these indicators for each state between 1990 and 2000*. We ask how has a decade of policy reforms changed performance? Figure 4 summarizes differences as well as relative performance on each objective in the most recent year for which data was available.[23]

**FIGURE 4: Comparing Performance**




Gauged in terms of change over a decade, Guanajuato outperformed Jalisco in preparation, participation and educational benefits. On the national scale of educational attainment it went from one of the lowest performing states to the middle range. Guanajuato is located in a region whose economic development has benefited from the North American Free Trade Agreement and is experiencing significant socio-economic change. It is not one of the country's highest performing states in absolute terms, but the rate of educational change in Guanajuato augurs well for a state that is leaving behind its historically high indicators of poverty. Jalisco seems to have performed better in completion and affordability (but data for both of these indicators is particularly fragile). Although Jalisco is a relatively highly developed state economically and has the second largest public university in the country, its rate of educational change was in general below the national average. Changes in electoral participation are quite similar in both states and above the national average. Is this increased civic activity related to the expansion of higher education or rather to greater pluralism in local politics? The latter may be the case: the

prospect of electing non-PRI governors in 1988 in Guanajuato and 1994 in Jalisco may have mobilized a previously passive electorate, weary of PRI politics. On the other hand, the growing levels of attainment in higher education in both states were perhaps contributing factors.

## Explaining Differences

Our purpose in conducting this study was to develop a model and related propositions that explain differences in performance between the higher education systems in two nations attributable to policy differences in the design, funding, and regulation of higher education. We do not mean to suggest that differences in policy are the only or even the most important explanations that might be offered for differences in performance. The two nations have different economies, geographies, industries and political realities. Any of these differences might arguably be advanced as a significant contributor to differences in the performance of their higher education systems, and undoubtedly all play some role.[24]

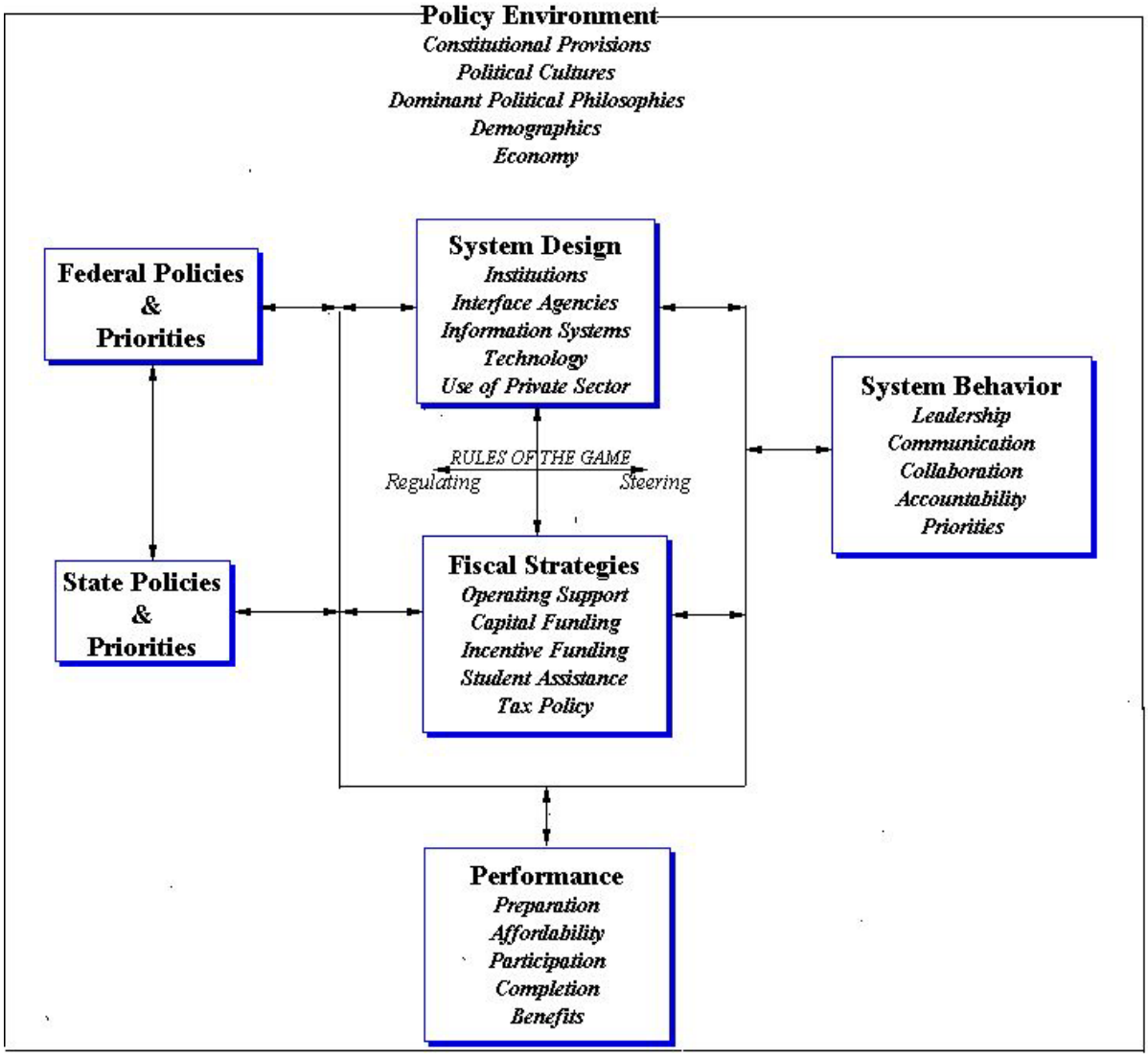
However, framing a discussion of performance around socio-political and economic variables that cannot in the short term be easily altered accepts the view that existing social arrangements are largely immutable. We believe that public policy matters. While it is not the only contributor to performance, it is the main contributor that voters in democratic nations expect their elected leaders to influence during their terms of office. Our study was undertaken to examine the effects of policy in Mexico and the United States with the hope of developing propositions that could subsequently be tested in other nations and modified by additional information. Through this effort, we hope to contribute to an informed public discussion about how desired higher education outcomes can best be attained. We hope as well to counter arguments that human failings, cultural deficits, or the economy prevent any meaningful improvements. Illuminating examples of policies that have produced intended outcomes will support the work of elected and appointed leaders who champion higher education policies that balance the needs of a nation and the interests of institutions in ways that serve the interests of the general public.

### *The Grounded Model*

Because our study was comparative both between the U.S. and Mexico as well as states within both nations, we began by studying the literature on higher education, public administration and political economy. From this literature, we developed an initial model to guide the process of data collection and our starting point for analysis. Each effort to revise our initial model to take into account the insights produced by our data generated new questions. With each new set of questions, the model was again revised so that the one with which we end our first three years of study bears little resemblance to the one with which we started.

Figure 5 represents the most recent version of our grounded model on policy and performance. It was developed after policy leaders from the United States and Mexico met at roundtables in each country to discuss and critique earlier drafts of the synthesis papers by the U.S. and Mexican research teams.

**FIGURE 5: Linking State and Federal Policies to Higher Education Performance**




- The p*olicy environment* reflects the relative authority of the executive and legislative branches of government, the constitutional or statutory status of institutions, and the political culture and traditions that jointly determine whether elected officials believe they can and should revise, eliminate or maintain policies aimed at influencing higher education performance. Some aspects of policy environments are fixed in the short term (population demographics, history, geography) while the costs to modify others are very high (constitutions). Policy environments nonetheless change, and sometimes dramatically, as a result of elections that alter party control of state government. They may also change when the goal of policy is to actually establish entirely new rules of the game and when the political system is undergoing alterations at the national or state level. Wide ranging social transformations, such as democratization and the extension of the market, will place demands on the general relationships between the state and higher education thus creating pressures to modify the (normally constant) policy environment, as it may be contested by various players, thus affecting the rules of the game. In

Mexico one goal of policy has been to stabilize and clarify the playing field as a prerequisite for establishing system wide priorities. Reforming the policy environment was just as important as defining the rules of the game

- *Federal Policies* including priorities, system design, fiscal policies, and reporting requirements. In the U.S. federal policies add to or subtract from the impact of state policies, depending on the degree of alignment between the two. In Mexico, federal policy is a centrally important influence on higher education throughout the country. It also defines policy at the state level in important ways

- *State Policies* influence system behaviors when not preempted by federal powers. In the U.S., states have the predominant voice in determining system design and fiscal policies, but the federal government plays an important and perhaps increasing role. The impact of policies is enlarged when federal and state initiatives are aligned. In New Jersey, for example, state policies on financial aid, accountability, and collaboration were clearly more closely aligned with federal policies than those in New Mexico. Influence patterns are not one-sided. New initiatives in influential states may lead to comparable initiatives at the federal level as in the case of the Georgia Hope Scholarships in the U.S. In Mexico, the federal government has traditionally carried out oversight and funding responsibilities for higher education, although there has been substantial and increasing devolvement to states during the past decade.

- *Rules of the game* are the principal means governments use to influence processes and outcomes in higher education. Rules may be formal and explicit or informal and unstated. They are created over time to reflect the particular combination of regulating (state control) and steering (institutional autonomy) a nation uses in governing its higher education system(s). As regulator, government provides facilities and operating support and tells higher education how to achieve specified priorities. As "helmsman," the state establishes priorities and holds institutions accountable for contributing to them in relation to the resources they receive, but does not tell institutions how they should achieve priorities. During the past decade, New Jersey consciously moved toward a greater emphasis on steering by eliminating regulatory structures and enhancing institutional autonomy and consumer choice. New Mexico has been hesitant to instigate change aimed at reducing institutional autonomy, but has arguably enhanced consumer choice through the creation of Lottery Scholarships. In Mexico for the most part policy reform has occurred through increased regulation although steering has become more visible recently. To simplify our discussion, we have classified rules under two categories, system design and fiscal policy

    - System Design includes the number and type of service providers; the missions assigned to each; the characteristics and powers of agencies in the interface

between government and providers; the information systems that collect, organize and report data essential to understand and influence performance; available technology and its uses, and the role assigned to the private sector;

- Fiscal Policy includes the amount of operating support and the regulations that apply to its distribution, institutional autonomy in determining capital needs and in securing funding, the amount and use of incentive funding, types and amount of student assistance, and tax policy.

- System behaviors reflect the impact of rules of the game on institutional leadership, priorities, communication, collaboration, and accountability. Rules of the game may afford higher education professionals considerable freedom to pursue institutional goals or may direct or encourage institutions to pay greater attention to public priorities.

- Performance reflects the aggregated outcomes of the individual colleges and universities that form a state system. In the model, available national on preparation, affordability, participation, completion, and benefits is used to estimate performance.

The model is not a one-way street but an exchange. While governments seek to influence higher education behavior and performance, the higher education community works equally hard to influence policy.

Professionals within a system adopt the behaviors they believe most likely to further institutional goals under the prevailing rules of the game. For reasons best explained by Nobel Prize-winning theorist, Herbert Simon, professionals charged with institutional leadership pay attention to overarching public policy concerns primarily as these coincide with institutional goals or when the rules of the game require their consideration. It is up to public policy leaders at both state and institutional levels to make sure that responses to the rules of the game achieve an appropriate balance between public priorities and the goals valued by the professional community.

## Propositions

Based on our case studies of higher education systems in four states in the U.S. and Mexico, we advance ten propositions or hypotheses about how policies can influence the performance of higher education systems. The propositions benefit from the input of policy leaders from the U.S. and Mexico contributed through the roundtable process. Separate policy papers reporting results of the U.S. and Mexican roundtables will be available in Fall 2002.[25]

***Proposition I:***

Government has the responsibility for identifying areas of performance where improvement is a public priority. Failure to identify state priorities constitutes an implicit acceptance of institutional priorities. In the absence of state or federal initiatives to set priorities and long term strategies, institutions will develop according to their own priorities, which may or may not reflect public needs.

*In New Jersey, the governor identified those priorities all institutions were expected to address, each from the perspective of its approved mission. In New Mexico, there were no explicit priorities that enjoyed any substantial degree of acceptance but there was the general understanding among legislators that access was extremely important. New Mexico did well in terms of its understood priority. New Jersey did well on the entire range of performance indicators and was one of two top performing states in the nation. New Mexico relied heavily on institutional priorities, but as one senior university administrator noted during the roundtable, "it may not be correct to assume that all institutions have defined priorities."*

*In Mexico, state governments may lack the political capacity to cause institutions to pursue expressed priorities. Jalisco´s reliance on institutional priorities in the past became part of the political culture, a difficult trait to modify as the state university's allegiance lies in its own priorities and its partial financial dependence vis-à-vis the state government. With a different political culture, Guanajuato was able to articulate statewide priorities.*

***Proposition II:***

States that have designed a rational system of comprehensive and diverse higher education institutions (including the independent sector) will be more cost-effective than those with systems that have evolved over time primarily in response to institutional aspirations. They will also be more effective in achieving such priorities as access.

*Guanajuato was able to improve access significantly by distributing university campuses and technical institutes throughout the state. The Jalisco government moved in this direction late in the decade, even though the state university had already expanded traditional professional programs in various regions with no coordination at the government level.*

*New Mexico has a very diverse set of institutions, but the degree to which they constitute a system remains a matter for discussion even in New Mexico. Because missions are so diverse, funding arrangements so often unique, and organizational structures reflective of institutional aspirations; the quality and relevance of available educational services are very dependent on where citizens reside. New Jersey has a centrally planned system that coordinates the behaviors of a comprehensive system of community colleges, comprehensive colleges and universities, research universities, and private institutions. New Mexico's higher education system costs more than New Jersey's on a per student basis (including student financial aid).*

***Proposition III:***

States that use well-defined priorities to steer their higher education systems increase their chances for achieving performance levels that satisfy elected leaders and reflect the needs of all citizens.

*New Jersey identifies the priorities all institutions are expected to address. Each institution is held accountable for addressing state priorities in relation to its approved mission. Elected officials in New Jersey reported high levels of satisfaction with system performance and the state scored well on national performance indicators. In New Mexico, state priorities have not been identified as reflected in an accountability statute that did not specify the areas in which institutions would be held accountable. Each institution must determine individually the appropriate balance between state needs and institutional priorities. Elected leaders in New Mexico expressed concerned about system performance, and the state did not score as well as New Jersey on most national performance indicators.*

*In fragmented systems, such as Mexico's, defining priorities is a challenge. Guanajuato was able to articulate a common set of policies for public and private institutions while at the same time taking advantage of federal policy to promote a more integrated system at the state level. The Jalisco government defined priorities but was unable to follow through effectively on them, as different institutional sectors continued to operate separately.*

***Proposition IV:***

State capacity to change the rules of the game in ways that build institutional responsiveness to public priorities is enhanced by an interface agency, dominated neither by state government nor institutions, and able to craft and coordinate system-wide strategies without controlling or dominating implementation. Interface organizations may boost the state's efforts at collaboration.

*Successful planning committees at the state level, such as Guanajuato's, work well when supported by the political and the institutional leadership, enjoy a clear legal base and some degree of financial (and therefore political) independence. This is an important precedent for a system in which states have been historically uninvolved in planning.*

*System level planning and coordination need not imply a dominating coordinating board in mature systems. Given gubernatorial and legislative support, as in New Jersey, a relatively weak interface agency can articulate public priorities developed by state government and provide a significant measure of system guidance and support for both state and institutionally initiated reforms. Both New Mexico and New Jersey have interface agencies with sufficient authority to fine-tune rules of the game without major changes in system design or fiscal strategies. Their credibility as "go-betweens" is enhanced by their relative independence both from state government and from the institutions they coordinate.*

***Proposition V:***

More effective interface agencies have their own data collection and analysis capabilities and prepare independent reports and policy recommendations. Information and public reporting are important inputs to institutional performance. States improve on outcomes they target through rules of the game when the results are tracked, reported, and publicized. Strong information systems are crucial for state capacity to develop system-wide policy and measure results.

*Weak coordinating agencies require supporting structures such as the New Jersey President's Council as well as statutory mandates to monitor and publicly report on institutional performance. New Jersey's experience may suggest that the authority required by an effective interface agency depends upon the level of system maturity and the degree of financial stress.*

*Neither Mexican state has information systems as such: each institution develops it own data and the information used in state level decision making is mostly based on enrollments and funding. There is scarce data and indicators on outcomes. However, Guanajuato is working on creating an information system: it would seem that merely expressing the intention of creating an information system may be a catalyst for collaboration. This also works the other way around, of course: collaboration is an emerging reality in Guanajuato and almost non-existent in Jalisco. Consensus at the Mexican round table was that information systems and performance indicators are urgent issues for federal and state governments.*

***Proposition VI:***

The "rules of the game' influence institutional actions and priorities. Changing the rules will change performance over time. Performance can be improved by systemic and fiscal strategies that use an appropriate balance of regulating and steering to promote attention to public priorities. In addition, performance may be enhanced when institutions perceive consistency in the rules established by different levels of government for various areas of policy.

*New Jersey changed the rules of the game for community colleges and comprehensive colleges and universities during the study to place less emphasis on regulation and more on steering. As these two sectors responded by becoming more entrepreneurial, they put pressure on the public research universities and the independents to compete more effectively and to be more conscious of costs. Graduation and retention rates, and transfer and articulation represent two of four statewide goals articulated by the governor's office. These goals are the basis for the award of performance funding, and results are reported annually to the general public. We reached no consensus about whether the rules of the game changed in New Mexico during our study. Our ambiguity may well have reflected the reluctance of elected and appointed state leaders to infringe on institutional autonomy.*

*Although decentralization is gathering speed in Mexico, it is challenging for states to change the rules because of different federally regulated sectors of higher education. Institutions perceive inconsistency between federal evaluation policy, which demands greater steering, and federal funding policy which has moved toward greater regulation over the past decade.*

***Proposition VII:***

States where rules of the game create system-wide initiatives that encourage joint higher education/K-12 collaboration do a better job of preparing students for postsecondary education than states where institutions independently pursue initiatives with little or no system level coordination. Where access is the priority, it is crucial to develop integrated policies for secondary[26] and higher education, where coordination and planning play an important role.

*In New Jersey, the EOF program has since 1968 provided state leadership to improve preparation and retention in all state higher education institutions. In 1997, the Higher Education Commission awarded incentive grants to ten institutions to support efforts aimed at improving retention and graduation rates for minority and low-income students. Such state coordinated programs as College Bound, the Statewide Systemic Initiative, the Network for Education renewal, and a recent Commission-sponsored GEAR-UP grant focused on the state's major urban systems all promote improved student preparation While institutions in New Mexico have individual efforts in many of the same areas, the system-wide coordination and collaborative behaviors found in New Jersey are largely missing. Institutional initiatives in New Mexico appear more likely to serve geographic targets of opportunity and already well-served districts than those with the greatest need.*

*Guanajuato was able to improve access significantly into a diversified array of university and technical institutions by means of a well-planned system of upper secondary schools. In Jalisco the government's moved to integrate and develop upper secondary schools has met with university opposition.*

***Proposition VIII:***

States can create a favorable climate for economic development through initiatives that: a) create partnerships among higher education, the private sector and state government; b) invest in strategic and cumulative ways in improving infrastructure; and c) provide a structure that encourages and rewards collaboration among higher education providers within and across sectors.

*It is important to design new institutions in accordance with the state's plan for economic development, distinguishing between the need for a new university campus and a technical institute*. S*ystem behaviors (especially leadership, communication and collaboration) differed in each state. Under the governor's leadership in Guanajuato collaboration among institutions and state wide planning initiatives have been successfully established. By contrast, in Jalisco collaboration for economic development occurs on a case-by-case basis with specific agreements between firms and university departments.*

*Both New Mexico and New Jersey invest in their higher education systems with the intent of promoting economic development. In higher performing New Jersey, economic development is closely tied to state fiscal strategies for funding technology infrastructure and for promoting collaboration among higher education institutions, the private sector and state government.*

*New Mexico also invests in technology and encourages increased collaboration, but strategies are more fragmented, less continuous and rely more on institutional initiatives.*

***Proposition IX:***

States can achieve affordable systems either through high-tuition or low-tuition strategies, but high performing states will offer significant student aid. In the absence of adequate need-based aid, low tuition alone will not create optimal participation levels. In the presence of high tuition, the participation of students ineligible for assistance will be inhibited.

*Despite different approaches, New Jersey and New Mexico received identical grades for affordability. Identical grades, however, conceal differences between who pays and who benefits in each of the states. In high tuition, high aid New Jersey, part-time, working students who are not eligible for state financial assistance are less likely to participate in college study than their New Mexico counterparts. In contrast, all full-time students in low tuition, moderate aid New Mexico, who maintain modest academic achievement, experience no tuition, regardless of need, if they attend an in-state public institution. Students with high need, however, may find it difficult to meet other costs of full-time study.*

*Jalisco´s public sector seems to be more affordable than Guanajuato's but costs in the private sector have grown significantly, especially in Jalisco. Low-income students may be pushed aside by middle income students in state universities with higher fees, whereas technical institutes are still within reach of low income students. Private establishments set prices along a wide scale, from levels that are barely higher than the public university to US$15,000 a year for elite establishments. Where tuition has been low in the past, it may be possible to increase tuition and fees in the public sector without affecting access if: 1) a diversified fee structure is maintained for different types of public institutions; 2) institutions are well distributed to all geographical locations; and 3) the National Scholarship Program initiated in 2001 targeting low income students at public institutions is expanded beyond its scanty initial coverage.*

***Proposition X:***

Fiscal policies in high performing states reward improved performance on both participation and completion. Clear and stable criteria for funding enhance the legitimacy of government policy in general, creating a favorable climate for collaboration. Coupling funding with performance (or outputs) as opposed to needs (or inputs) will increase policy effectiveness if information on performance is produced and disclosed.

*High operating support allocated largely on the basis of the numbers of student who enroll in specified programs, as in New Mexico, encouraged institutions to focus on access, producing high participation rates but low completion. Operating support allocated without regard to the numbers of students who enroll in specified programs as in New Jersey leaves institutions free to place relatively little emphasis on access.*

*Although federal discourse stresses that public universities in Mexico have the incentive to improve quality and stabilize growth, evidence on funding trends only partially supports this*

*perspective. Since competition for federal development funds is based on planning proposals by institutions and outcomes are usually not measured, the effectiveness of this funding cannot be assessed. Institutional leaders complain about problems in funding policy: 1) unclear rules governing allocation criteria[27]; 2) certain institutions are successful in changing allocations through political negotiations[28]; 3) uncertainty in funding levels from year to year (as a result of tight macroeconomic management and the 1995 financial crisis).*

## Discussion

In brief reprise, the model suggests such performance indicators as preparation, affordability, participation, completion, and benefits are influenced by the priorities colleges and universities pursue, by the leadership they encourage or tolerate, and by their response to such system unifiers as communication, collaboration, and accountability. Governors, legislators, and state administrative agencies establish, alter, or reinforce explicit or implicit priorities and the "rules of the game" through which they are to be pursued. Colleges and universities try to maximize preferred goals within these rules. No two states have exactly the same rules. While federal rules are consistent across states, their impact is far from uniform. In some, federal and state rules are complementary, while in others rules conflict.

Rules of the game are important because they point to the levers available to policy makers for influencing the priorities and behaviors of professionals within their higher education systems. Fiscal policy is the most popular and least threatening way of trying to change performance. Fiscal policies can support diversification of institutional missions, encourage greater participation, and make retention and completion more important targets for institutional action.

Changing systems is a more difficult proposition than altering fiscal policy so it is less frequently used in efforts to influence performance. But some objectives such as transfer and articulation, student and teacher preparation, economic development and distance education cannot be implemented effectively without systemic initiatives. We found considerable evidence of system change in New Jersey and somewhat lesser evidence of system change in New Mexico.

There is also evidence of efforts to change systems in Mexico. Guanajuato has approached the need for change more systematically than Jalisco where the process has been quite fragmented. Fragmentation of the change process underlines the need for additional efforts to improve communication and collaboration. Federal initiatives to decentralize policy to the states raise the stakes for state efforts to reform higher education systems and create the need for more coordinated approaches to institutional and system change.

Changes in rules of the game should always be sensitive to context and adopted in relation to defined priorities. Even when these cautions are followed, professionals resist changes they perceive as potentially threatening to the competitive status of the institutions they are committed to protect and enhance. And they will report worst-case scenarios as the most likely consequences of any change that is proposed. Indeed, it is their responsibility to do so. At the same time, as evidenced by restructuring in New Jersey, players are sufficiently resourceful to learn how to play the game effectively within some reasonable period of time regardless of rule

changes. Rule changes have both intended and unintended consequences. Sometimes it may make sense in a system where behaviors or performance are different than desired to change the rules even if the consequences are not fully predictable. The increasing diversity of players, the dynamics of the political process, new demographic realities and the greater presence of market forces tend to induce change whether governments generate effective policy or not, and institutions must cope with these environmental changes in some way. It is preferable to manage change in a coherent policy context.

This points to the need for governments at all levels to enhance their capacity to generate a coherent policy framework such that higher education institutions may boost their strategic capabilities to face change. The experiences of New Jersey in the U.S. and Guanajuato in Mexico seem to bear this out. An important issue for the Mexican cases is the extent to which the federal and state governments developed their capacity to influence higher education in purposeful ways. In Mexico's transitional situation, many variables are changing simultaneously and not all are the result of higher education policy. Maintaining coherence in higher education policy in such a context is an interesting challenge, one that many countries today seem to face.

Finding the appropriate mix of regulation and steering remains a key issue. On the one hand, history and political culture are obvious determinants of how this mix plays out. The extent of governmental action or institutional autonomy has to do with the political vigor of each player and with political traditions. A history of centralization will tend toward regulation, for example, and more democratic settings will surely emphasize institutional autonomy as well as accountability and disclosure. But there is also a technical aspect to this balance that may be the object of policy. To the extent that evaluation and performance funding extend their reach as policy tools, a greater emphasis on steering would seem to be called for. The distinction between *procedural* and *substantive* autonomy is useful here: procedural autonomy seems to decline but does not necessarily affect substantive autonomy.[29] Technical institutes as well as universities require measures of autonomy to be entrepreneurial and to maintain their sense of mission. Such concerns should be resolved on the basis of policy rather than political tradition.

From these observations, we conclude that institutionally centered reform in both nations, however meritorious, is doomed to failure in the absence of systemic reform. As a speaker evaluating the Annenburg Project on school reform in the U.S. put it, "it's like running up the down escalator when the system moves in one direction while the reform tries to move in another. Initial gains are quickly overcome as people tire."[30] We also believe that national and state systemic reforms are likewise doomed in the absence of relevant institutional initiatives and supportive institutional leadership.

## Notes

[1] Since inception of the project, ten younger scholars have contributed to the research.

[2] The World Bank, *The State in a Changing Society*, World Development Report (Washington, D.C.: World Bank, 1997).

[3] In this report as in others in the series, we draw heavily on the work of the National Center for Public Policy and Higher Education, *Measuring Up 2000: The State-by-State Report Card for Higher Education* (San Jose, CA: 2000). We believe the performance indicators they define and measure represent the outcomes policy makers *should* be concerned with attaining in all nations.

[4] D. C. North, *Institutions, Institutional Change, and Economic Performance* (New York: Cambridge University Press, 1990).

[5] Following the "triangle of coordination" of higher education systems in Burton R. Clark, *The Higher Education System* (Berkeley, CA: University of California Press, 1983).

[6] Neave, G. and F. van Vught, (1994) "Government and Higher Education in Developing Nations: A Conceptual Framework" in *Government and Higher education in Developing Nations*, Neave and van Vught, editors, Exeter, UK: Published for IAU Press by Pergamon.

[7] M. S. Grindle, *Challenging the State: Crisis and Innovation in Latin America and Africa* (Cambridge; New York: Cambridge University Press, 1996).

[8] R. C. Richardson, K. R. Bracco, P. M. Callan, and J. E. Finney, *Designing State Higher Education Systems for a New Century* (Phoenix: Oryx Press, 1999).

[9]NCPPHE, (2000) *Measuring Up 2000: The State-by-State Report Card for Higher Education*

[10] C. Gahan and M. Hannibal, *Doing Qualitative Research Using QSR NUD*IST* (London: Sage Publications Ltd., 1998).

[11] Also known as a "member check."

[12] The roundtable was patterned after the Pew format developed by Robert Zemzky at the University of Pennsylvania.

[13] In addition to three federal universities, including the National University (UNAM), the Automous Metropolitan University (UAM) and the National Pedagogic University (UPN).

[14] We use the terms, "steering" and "regulating," in the sense that they are use by D. Osborne and T. Gaebler in their book, *Reinventing Government*, (1992) Reading, MA: Addison-Wesley.

[15] Estévez, Jesús, 2002, "¿Quién recibió cuánto y por qué?", *Revista de la Educación Superior*, México: ANUIES, N° 122, 123-132.

[16] Since this issue has always been politically very sensitive, it was interesting to learn that almost all state universities were able to raise fees without political turmoil. The important exception is UNAM, which to the present has found it politically impossible.

[17] This idea was explicitly articulated by the Federal Undersecretary for Higher Education during the Mexican policy roundtable discusion.

[18] Ríos, Herculano, 2001, "La desconcentración de la educación superior en cifras", *Revista de la Educación Superior*, México: ANUIES, N° 120, p. 117

[19] Mortenson, T. G, (Sept. 25th 2001) *Revisiting the Paradox of Higher Education Opportunity in New Mexico," presentation to the legislative finance committee, Santa Fe, New Mexico,* p. 14, 17.

[20] Finney, J. (December 11, 2001) "Personal Correspondence with Data Displays," San Jose, California: National Center for Public Policy in Higher Education

[21] Very importantly, the new state-level technical institutes have the legal authority to enter into contractual agreements with firms, which the federal institutes lack.

[22] A detailed discussion of the evidence on performance for New Jersey, New Mexico, and the U.S. appears in the case reports for the two states and in *Federal Policies and Higher Education in the United States.* All three of these reports can be obtained from the project website, www.nyu.edu/iesp/aiheps

[23] Details for each performance category and the variables used in its construction can be found in *Políticas de educación superior en Jalisco y Guanajuato:¿Cómo explicar las diferencias en el desempeño de dos sistemas*

*estatales durante los años noventa?* available in both English and Spanish on the project website, www.nyu.edu/iesp/aiheps

[24] Two sources that investigate the contribution of contextual variables to report card performance are: Cunningham, A. and Wellman, J. (2001*). Beneath the Surface*. The National Center for Public Policy and Higher Education. San Jose, CA; and Martinez, M. C. (August/September 2002). "What's in a Grade: Higher Education Report Cards". *The Review of Higher Education*. 26 (1).

[25] Greg Wegner is editing a policy paper summarizing the results of the roundtable discussion. This paper will be distributed by the National Center for Public Policy and Higher Education in the fall. Concurrently, the policy paper will be available in pdf format on our website.

[26] It should be recalled that many public universities manage large subsystems of upper secondary schools.

[27] There is a long standing but unresolved debate between the rectors' association and the federal government over funding criteria; studies have shown that institutions receive funds on different standards; and the higher education planning document of the Fox administration recognizes the need for an equitable funding formula.

[28] After the student strike at the National University in 1999-2000, UNAM´s rector successfully lobbied federal legislators for special funding allocations arguing that political stability was worth the price; rectors from state universities expressed their concern over "special treatment" accorded the National University.

[29] Berdahl, Robert ,( Winter 1990) "Public Universities and State Governments: Is the Tension Benign?" *Educational Record.* V71, n1, pp 38-42.

[30] Simmons, Warren (Executive Director, Annenberg Institute for School Reform at Brown University) in remarks at The Steinhardt School of Education, Education Policy Breakfast Series, New York, February 27, 2002.