

Institutional Reform  
in Mexican Higher Education:  
  
Conflict and Renewal  
in Three Public Universities

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Washington, D.C.  
February 1998—N° EDU-102

*This paper is a direct outcome of the Latin American Fellows Program on Higher Education at the Harvard Graduate School of Education, Spring 1996. The opinions expressed are the author's, and in no way represent the official position of the Inter-American Development Bank. The issues covered in this paper were developed during discussions with Lewis Tyler, Hernán Courard, Marcela Mollis, Maria Helena Magalhaes, and Juan Carlos Navarro. The author also acknowledges the assistance of Gabriela Czarny and Eloisa Gallardo for their work in transcribing the interviews and providing data, Wietse de Vries for making available his fieldwork material on institutional change, and the busy university officials who kindly and enthusiastically provided invaluable information.*

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“Transforming the University of Guadalajara is like rebuilding an aircraft in midflight. You must reconvert the engines from internal combustion to jets. You have to make it fly at a greater speed without increasing fuel consumption. Everything must be done without touching down, with limited amounts of fuel, without upsetting the passengers and with terrorists on board.”

Ricardo Arechavala, 1995.

## ACRONYMS

ANUIES	<i>Asociación Nacional de Universidades e Instituciones de Educación Superior</i> : the national council of rectors. It is a voluntary association, whose members may be affiliated with public or private institutions. It is funded by member fees, the sale of services and a federal subsidy.
CIEES	<i>Comités Interinstitucionales de Evaluación de la Educación Superior</i> : the “Peer Committees” constituted jointly by ANUIES and the Undersecretary for Higher Education. Its members are academics with temporary appointments; its task is to provide external evaluation to academic programs and departments at the undergraduate level.
CENEVAL	<i>Centro Nacional de Evaluación</i> : a nongovernmental agency set up initially by the federal government but obligated to obtain income from the sale of services to institutions. It designs, tests and administers entrance examinations to upper secondary ( <i>preparatoria</i> ) schools and universities; it is also committed to designing, jointly with professional associations, national competency examinations for graduates in various professions.
CONAEVA	<i>Comisión Nacional de Evaluación</i> : an agency of the federal government, associated with the Undersecretary for Higher Education. Rectors of various public universities are also members; it defines basic criteria for evaluation in higher education.
FOMES	<i>Fondo de Modernización de la Educación Superior</i> : a fund used by SESIC to support specific proposals presented yearly by universities, which are evaluated by experts; it is a central component of funding policy.
SEIT	<i>Subsecretaría de Educación e Investigación Tecnológica</i> : the Undersecretary reports to the Secretary of Education and is responsible for regulating and funding the (four-year) public technological institutes as well as technical upper secondary schools ( <i>bachilleratos tecnológicos</i> ).
SESIK	<i>Subsecretaría de Educación Superior e Investigación Científica</i> : the Undersecretary reports to the Secretary of Education and is responsible for regulating and funding public universities and (two-year) technological universities.
UAP	<i>Universidad Autónoma de Puebla</i> (Autonomous University of Puebla).
UdeG	<i>Universidad de Guadalajara</i> (University of Guadalajara).
UNAM	<i>Universidad Nacional Autónoma de México</i> (Autonomous University of Mexico).
UNISON	<i>Universidad de Sonora</i> (University of Sonora).

# Preliminary Remarks

This paper provides a process analysis of institutional turnaround in three public universities in Mexico. The focus is on policy reform at the governmental level and on changes at the institutional level, especially on the political and management dimensions. The point of departure is Moisés Naím's proposition that, in the wake of macroeconomic reform in Latin America, hard questions need to be asked about public institutions, whose necessary reform he calls part of the "second generation of change" (Naím, 1994, 1995). How are public institutions responding to the higher education policy reforms initiated in the early 1990s in Mexico?

The specific questions asked here derive from the following concerns:

*"In the contemporary higher education setting, four pressures on decision making have become particularly prominent as campuses strive to carry out their missions... Like organizational life, they are complex, messy, and strewn with ambiguities. But these values are basic, and they must be reckoned with if a campus is to be able to cope effectively. The four imperatives are: the push for participatory governance, the mandate for efficient management, the urgency to adapt to a changing environment, and the salience of effective leadership."* (Schuster, Smith, et al., 14)

But in the past participatory governance, efficient management, capacity to adapt to a dynamic environment and effective leadership were not salient characteristics of higher education institutions in Mexico and throughout Latin America. Scepticism about the ability of the public institutions to change is not uncommon in public debate. In 1989, the Mexican Secretary for Higher Education had this to say: "Very few Mexicans are satisfied with the current

situation of higher education. Most demand better quality and more ample coverage. Complaints come from inside and outside the education sector. They differ only in how they are expressed but coincide around essential issues: universities must understand and attend to the demands society places on them. Briefly put, the effectiveness of higher education institutions is in doubt." (Gago, 1989)

Recovering the basic educational function required of a university was the fundamental purpose of what Mexican policymakers in the 1990s have called the *modernization* of higher education.

In the universities examined here, reform came on the heels of conflict resulting from institutional collapse. These organizations had seen their internal control systems dissolve and their external legitimacy relationships crumble. Although turmoil is not seen here as a necessary catharsis that must precede institutional renewal, it constituted an important ingredient of the three experiences. These are not just stories of crisis but also of renewal. The means by which each university went about this painful process, the structural outcomes (such as can be identified so early in the game) and the redefinition of their institutional missions are the object of this paper.

Thus, a premise that underlies this analysis is that higher education reform is a complex social process. Adaptation to the market is undoubtedly a crucial dimension of this experience (World Bank, 1994), but this factor surely acts through a web of institutional factors that have different expressions in various national contexts. Change, in this context, may on occasion resemble the rapid organizational innovations that some of the recent literature describes as *postbureaucratic* or *postentrepreneurial* (R. M. Kanter, 1989). However, for the most part,

the universities examined here have struggled to raise themselves to a plane of acceptable contemporaneous behavior in higher education.

This paper will look at how this is happening in some public institutions of higher education in Mexico, and it will ask the question: does management matter? The analysis is biased toward structural change at the level of upper management, as opposed to change in academic practice and organization. The emphasis is on visible change, rather than on the cultural dimension or resistance to change, although

these aspects will be addressed. The sources used were documentary evidence, official statistical data and, especially, interviews with members of institutional leadership teams.

The paper is organized into three sections: one provides an overview of recent developments in the higher education system, government policy and the political environment; a second section analyzes changes in three public universities; and the conclusion, which looks at the common issues.

# A Review of Recent Trends<sup>1</sup>

During the past decade, higher education in Mexico has undergone important changes. Demographically, culturally, and in policy terms, significant shifts have occurred and they are continuing to change the way institutions operate and the way they relate to their relevant publics, both social and governmental. On the stage of higher education, the cast of actors has become more diversified, and they are playing out scripts and promoting types of discourse that were unheard of only recently.

For many years, the dominant institutional image was that of the public university and this image, in turn, was monopolized by that of the supposedly prototypical institution, the National Autonomous University of Mexico (UNAM). Thus, an institution of higher education was considered to be a *public university*, which was defined along the following basic rules and structures: student access was non-competitive, fees were nominal, unconditional public subsidies constituted the only source of income, the institution was autonomous in setting its own rules in all respects, the curriculum was geared to specialized professional training within the *facultad* structure (mostly in law, engineering and medicine), and management was nonprofessional and political. Political activism on the part of student federations and unions was considered a normal aspect of the university experience and was accepted as a customary means of political socialization for access to a career in politics. Innovation in teaching was a secondary issue in a closed economy that was heavily influenced by the state. Research, technological development, and postgraduate training emerged with difficulty under the impulse of local initiatives by academic innovators who rarely found a congenial

policy environment at the institutional and government level.

This picture no longer holds as a general rule. There are more than forty public universities, some of which were modeled after UNAM, but others were designed (or were reformed) to follow different structural frameworks. A significant development is the emergence of more than 250 private institutions and the diversification of public higher education: there are more than 100 public technological institutes, and various public two-year postsecondary vocational institutions. Fees are charged in most public universities, and identifying additional sources of income has become an important activity on the part of management in public as well as private institutions.

Private institutions are now competing for prestige and for a share of the nation's pool of students which has not grown in almost ten years (following the surge of the 1970s, which was largely concentrated in public universities). An important shift has been what Daniel Levy calls *elite flight* from public institutions since the early 1980s (Levy, 1986): it is clear that most upper echelon business people and an increasing proportion of public sector officials prefer private universities for educating their offspring. This is also becoming increasingly true for the urban middle class: whereas total enrollment in public universities stopped growing a decade ago, student numbers continue to grow in private and in public nonuniversity institutions (see Table 1). In 1980, public institutions held 87 percent of total enrollment (74 percent of the total was in public universities); in 1993, the national share of enrollment in public

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<sup>1</sup> This section relies on Kent (1994) and Kent (forthcoming).

institutions was 79 percent (with an increasing percentage for the technological institutes). By the mid 1990s, enrollments in private institutions were on the same order of magnitude of the total national enrollment 20 years earlier.<sup>2</sup>

For the most part, the reforms of recent years have been attempts to solve the problems created by changes that occurred in public universities since the rapid, unplanned enrollment expansion of the 1970s. About 75 percent of that expansion in enrollment was absorbed by public universities, some of which grew to unmanageable proportions and became centers of political conflict. This development affected their public image, undoubtedly contributing to the recent growth of the private sector. One important corollary of this growth was the hiring of young academics to teach the increasing number of enrolled students: national totals for academic posts went from under 20,000 in 1970 to about 100,000 in the mid 1980s. Since the pool of postgraduate degree-holders was very small at the time, many people hired as university instructors lacked the necessary training. In addition, universities responded to the pressures of rapid growth and politization, with unprofessional administrative cultures, resulting in top-heavy, inefficient and politically fragmented bureaucratic structures and a low capacity to follow coherent development strategies (Brunner 1991; Schwartzman 1993).

The crisis of the 1980s brought to the surface the contradictions involved in this process of unregulated expansion. The economic crisis and government policies aimed at opening the economy and restricting the role of the public sector meant that funding for universities between 1983 and 1989 was severely restricted. Additionally, high inflation in the 1980s whittled away at academic salaries, reducing their real purchasing power by about 40 percent on the average. Although universities were not as hard hit as

other areas of the public sector, which were actually closed down or sold off, this severe retrenchment had drastic effects on the institutional fabric and academic morale: whereas some leading scientists and academics left for greener pastures abroad, the majority of Mexican professors were forced to find additional employment. As a result, several institutions went into downward spirals of factionalist struggle over decreasing resources. This, evidently, did nothing to offset growing criticism of public universities and to stem the flow of students toward private institutions.

At present a national average of about 15 percent of the 20 to 24 age group is enrolled in higher education institutions, albeit in a context of great regional differences. The *modern* areas of the country—the capital, the large cities and the industrialized northern region bordering on the United States—virtually belong in a different world when compared to the impoverished South. There are truly *many Mexicos*, and higher education has many different faces. The quality, availability, and capacity for change vary accordingly.

#### **CHANGES IN GOVERNMENT POLICY TOWARD HIGHER EDUCATION IN THE 1990s**

During the crisis of the 1980s the much heard lament was low salaries, scarce government funding, and loss of prestige of public universities. More recently, government officials, university rectors, and department heads have picked up on the chant of modernization: raising quality, improving efficiency, and making education more relevant to economic development. The discourse of the 1990s proclaims that higher education is moving from a *social welfare* model, built around political negotiations between government and corporate actors within the system (especially unions and student federations), to a *developmental* model emphasizing efficient management, relevance for the labor market, and technological transfer.

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<sup>2</sup> It is becoming clear in the mid 1990s, however, that higher education is entering a phase of expansion. Recent predictions point to a 25 percent increase in national enrollment by the year 2000 (*Programa de Desarrollo Educativo, 1995-2000*).

The Salinas administration (1988-1994) focused strongly on education at all levels.<sup>3</sup> Funding was increased in real terms and the traditional *incrementalist* stance in educational finance was modified in favor of more selective procedures. An important element in higher education policy was the government's move from a *demand-led* to an *expenditure-led* approach. The array of programs set up after 1989 sent the message that the rules of the game for higher education were changing in various respects:<sup>4</sup>

*Institutional Diversification* Several new *Technological Universities* have been created, offering two year postsecondary training linked to regional job markets and in close coordination with local business leaders. The experiences of the French *Instituts Universitaires de Technologie* and the community colleges of the United States seem to have partially inspired policymakers in this effort.<sup>5</sup> The principal educational policy statement of the Zedillo administration indicates that no new universities will be established and that expansion in the public sector will consist exclusively of technological institutions, i.e. two-year TU's and four-year technological insti-

tutes (*Programa de Desarrollo Educativo, 1995-2000*).

*Academic Roles and Values* Development of the teaching profession was emphasized through the following programs: productivity bonuses to individual teachers based on evaluation scores from students and peers; curriculum evaluation and restructuring resulting from on-site visits by external peer review committees set up in 1991; and a teacher retraining program through the promotion of graduate studies which was proposed in late 1993. Research received greater attention than teaching: CONACYT funding increased substantially. There is considerable rhetoric about developing applied research linked to industry (a modality that neither Mexican scientists nor businessmen are used to); and funding criteria have become increasingly selective with a focus on internationally competitive research projects. As a result, several institutions have announced retraining programs for professors and have indicated that in the future only those with postgraduate degrees will be considered for hiring.

*Institutional Autonomy* Protected by the Constitution, this is a jealously guarded value in public universities. Officials were quick to point out to university rectors that they were able to implement rapid top-down curricular reforms in technological institutes.<sup>6</sup> In fact, governments at the state level in some cases adopted an active interventionist posture toward autonomous universities by pushing local legislatures to change university statutes even in the face of opposition by professors and students. It would seem then that autonomy was disregarded in certain cases where activist politicians felt strongly about their plans for modernization and where loss of institutional prestige in public universities deprived its leadership of the capacity to deflect outside intervention. However, public policy does demand that universities produce an institutional development

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<sup>3</sup> In 1992 an agreement was reached between the federal government and the national teacher's union to decentralize primary and secondary education (then consolidated into what would be called *basic* education). The national curriculum was modified, a new set of public school textbooks (free and obligatory by Constitutional mandate) was designed, and an incentive scheme for teachers was created. Thus, reforms were implemented for basic and higher education; however, technical educational at the secondary level was left untouched.

<sup>4</sup> The set of policies for higher education by the Zedillo administration does not depart significantly from the policies of its predecessor.

<sup>5</sup> The only public university created in this period in the state of Quintana Roo (whose only institutions were a technological institute and a normal school) was designed along very different lines from the traditional Mexican university: academic organization based on departments, course offerings linked to regional needs, doctoral requirements for academics, and student fees.

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<sup>6</sup> Technological institutes are four-year institutions designed to train engineers and administrators which are centrally controlled by the federal government. They constitute a different sector from the recently created technological universities which offer two-year programs.

plan based on internally generated priorities. Autonomy, thus, seems to have been redefined in practice to imply freedom to design and pursue academic innovation but not freedom to drive a public institution of higher education to bankruptcy.

*Curriculum Reform* Universities (which are free to set their own academic standards and curriculum contents) were encouraged to evaluate course contents in order to make programs more flexible and more relevant to regional demands. In the centrally-regulated four-year technological institutes, the Undersecretary for Technological Education implemented a national curricular reform.

*Student Selection and Assessment of Graduates* Discarding the traditional “open-door” admission policy in most universities, the government required that entrance examinations be administered. In the early 1990s, the College Entrance Examination Board was hired by several universities. Since then, the *Centro Nacional de Evaluación* (CENEVAL), a non-governmental institution, was created to develop and implement entrance examinations for upper secondary schools and higher education institutions.<sup>7</sup> By late 1994, CENEVAL had administered examinations to 41 institutions in 19 states (CENEVAL, 1995). Additionally, the Center began the design of *professional competency examinations* for graduates of various professions. These exams are designed in collaboration with members of professional associations. One objective is to establish standards for Mexican graduates that will be comparable to those of the United States and Canada. A series of tests for assessing minimum professional competence in graduates was introduced initially in the health

profession, engineering, and law (ANUIES 1993).

*Governance and Management* Policymakers insisted that universities develop more efficient management and strategic decision making systems based on the use of systematic information. Several institutions have modified their internal governance structures, reducing the influence of students and increasing that of teachers and administrators. Greater financial accountability is also being stressed, although it would seem that university administrators are basically more accountable to government officials and not to the public at large.

*Funding* Government funds for higher education increased throughout the 1990s (see Table 2). The traditional *incrementalist* and *benevolent* funding formula (based on the number of students reported by each rector) was replaced by a new approach to finance research, innovative programs, and individual productivity bonuses for teachers and researchers (Gago 1992). The growth of basic operational subsidies was kept to a minimum, whereas targeted funds for specific programs were significantly increased. Institutions were required to compete for these funds on the basis of project proposals, which were evaluated by committees of experts. In 1995, officials of the Zedillo administration made adjustments to the terms for granting such funds: upon receiving a grant, the rector must sign a contract with the Undersecretary of Higher Education to comply with the terms of the proposal and to make public both the results of the project and the way the funds were managed (thus introducing an element of accountability that had hitherto been absent).

Additionally, public institutions were urged to expand their income from non-governmental sources by raising their (traditionally nominal) student fees, selling services, and entering into contracts with local businesses (Arredondo, 1992). By the mid 1990s, most public universities in Mexico had raised their fees and tuition rates, although on a widely varying scale (from US\$50 a semester in some institutions to US\$300 in others). The principal catalyst for this seems to have been the government’s announcement that basic subsidies would remain the same and that

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<sup>7</sup> Initially sponsored by the federal government during the first year of operations, CENEVAL was designed to obtain subsequent income from the sale of assessment services to educational institutions. It competes with the CEEB and is setting up assessment procedures in other countries (it has been hired by the Bolivian government to develop an entrance exam for normal schools). CENEVAL designs and administers the exams, but the institutions define their own admission policy on the basis of exam results, which means that there are national standards but different admission criteria.

funding could only increase through self-financing or through project proposals. Apparently, an unwritten rule emerged to the effect that more government funds would be granted to institutions that developed significant alternative financial resources (interview with the Vice Rector for Budgeting, University of Puebla). In some cases, this additional income accounts for about 10 to 15 percent of university budget.<sup>8</sup>

Nevertheless, another unwritten rule, inherited from the previous period, continued to prevail. Throughout the 1970s and 1980s, incrementalist funding based on the previous year's subsidy—and usually subject to political negotiations—had become deeply entrenched in the relationships between the federal government and individual institutions. By the beginning of the 1990s, this tendency had generated significant funding differences among universities, regardless of the formal subsidy regulations announced by the Undersecretary. Even today, it is impossible to detect equivalences across institutions in basic input indicators, such as *pesos* per full-time-equivalent student or *pesos* per full-time-equivalent professor. The same is true for output indicators, such as pesos per graduate. These disparities continue to be an issue in discussions among rectors and government officials.

*Evaluation* In 1990, the government created a National Evaluation Commission for Higher Educa-

tion, composed of public officials and rectors, in order to develop evaluation at the following levels:

- C Institutional self-evaluation, performed by each establishment according to preestablished government criteria, was supposed to lead to a mission statement and a development strategy. Compliance with this procedure was, in turn, made a prerequisite in applying for project funding.
- C External review of academic programs, carried out by peer committees (*Comités Interinstitucionales de Evaluación de la Educación Superior*).<sup>9</sup>
- C Individual evaluation of professors and researchers: this procedure is designed and conducted locally by each institution. The results are used to award individual performance grants. Federal funds allocated to this purpose carry the explicit proviso that unions be excluded from allocation criteria and procedures. Thus, income from this source is not subject to collective bargaining, with the drawback—for academic staff—that it does not accrue toward pensions either.
- C Evaluation of graduate programs performed by CONACYT: This procedure is based on performance indicators centered on the research productivity of the department's academics, which are analyzed by peer committees. The results are used to formulate a list of so-called *programs of excellence* which are then eligible for research grants, scholarships and other types of financial assistance. This list is made public once a year. The impact of this procedure has not been insignificant, as funds for graduate programs can be obtained only through CONACYT. One result has been the separation of policy for undergradu-

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<sup>8</sup> Consistent figures on higher education finance in Mexico are difficult to come by: government reporting is quite bare and individual institutions still refrain from publishing a full financial report. However, one official indicated in an interview that the need for public accountability in this area has been pointed out to him by potential donors and/or buyers of university services in the local business community. It is significant that one university that has seemed unable to travel this route was the National University (UNAM). An announcement to raise fees in 1992 generated a political reaction by student groups; since then, however, UNAM has taken measures to increase the sale of services to the industrial sector and certain faculties (notably engineering and administration) have developed significant programs in managerial and technical training.

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<sup>9</sup> As of late 1995, peer reviews had been performed at 28 public and 5 private universities, 9 technological institutes (public) and 4 departments of the National Polytechnical Institute (public). (Interview with Manuel Pérez Rocha, General Coordinator of Peer Review Committees, Oct. 1995)

ate studies from policy toward the graduate level (De Vries, 1996).

The rhetoric about evaluation and economic relevance is not totally borne out by the actual operation of government programs. Institutional self-evaluation has, in several cases, become a routine administrative procedure whereby the rector makes a technical report to federal officials without involving faculty and administrators in actual evaluation exercises. Accountability has been interpreted in terms of reporting to the government but not to the public at large. Additionally, the effective rules for assigning operating subsidies and targeted funds do not seem to follow uniform criteria.

However, for a higher education system that expanded during a generation under a lax form of political regulation legitimated by a welfare ideology, these developments undoubtedly represent important changes. They express a basic shift in the *system culture*. It would seem that federal officials are playing an increasing role in *managing* the public higher education system by means of funding *inducements* and specific policy recommendations. This has set in motion—or has supported—various reforms at the institutional level in public universities.

Increasing governmental scrutiny of the three public sectors (universities, four-year technological institutes, and the new two-year technological universities) stands in contrast to its *laissez faire* attitude toward the operation of the growing private sector. The government's position in this respect seems to have moved through various phases over the past decade and a half. During the 1980s, when the public universities descended into crisis and the expansion and legitimacy of the private sector gathered strength, the de facto position of the federal government was one of benevolence toward the establishment and growth of private institutions of all types, implicitly sending the message that the public/private contrast would generate a beneficial competitive environment. In the 1990s, government benevolence continued to prevail with respect to criteria for founding new private institutions (often without regard to basic

dimensions of quality, such as academic infrastructure or teacher training). However, the environment created by these policies tended to put public institutions on a new footing, setting new standards of comparison between public and private establishments. When it became evident that public universities were initiating reform programs, some private institutions began to follow suit. Two events stand out in this regard. For the first time, public funds became available to private institutions: in 1991 CONACYT announced that funds for research and postgraduate programs would be assigned on the basis of quality to both public and private institutions. Various private universities with an R&D mission began competing for these funds.<sup>10</sup> The second factor is a recent initiative by the Federation of Private Higher Education Institutions<sup>11</sup> to set up an accreditation mechanism based on institutional self-evaluations (roughly following the methodology used by the Southern Association of Schools and Colleges in the United States). Officials of the federal government have given political and technical support to this initiative, thus sending the message to the rest of the private establishments that, although the government will not intervene directly in their operations, the self-regulation of the private sector for quality assurance and betterment is in high favor.

## CHANGES IN THE POLITICAL AND SOCIAL ENVIRONMENT

This policy shift could not occur in a social or political vacuum. Various changes in the political and social environment are worth mentioning in this regard. The first is the trend toward democratization and wider social participation in the political system. Until the mid 1980s, since universities were, in effect, democratic oases in a semi-authoritarian system, they served as obvious vehicles for political action by the

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<sup>10</sup> These include: Instituto Tecnológico Autónomo de México, Universidad Iberoamericana, and Universidad de las Américas

<sup>11</sup> The Federación de Instituciones Mexicanas Particulares de Educación Superior (FIMPES) is a nonprofit association composed of approximately 60 private universities.

opposition on the left. However, the gradual but real opening up of the Mexican political system has tended to attract political activists toward the party system and parliamentary action, thus defusing activism within the universities. Social movements in universities today seems to be more cultural than *organically* political. An expression of this shift was the ease with which government officials prompted universities to raise student fees and tuition rates in the early 1990s, a policy that faced surprisingly little student opposition.<sup>12</sup>

One analyst of these changes (Gradilla, 1995) points out that, at a more general level, the changes in the Mexican political system had an important effect on the political environment surrounding public universities. The macroeconomic reforms and the social thrust toward democratization have displaced corporatist arrangements of political control at various levels. Although the ascent of the left within various institutions during the 1970s had eroded the role played by universities in these arrangements, government officials had been able to rebuild a fragile consensus with these *upstart* universities based on the benevolent and politically discretionary use of subsidies. By the second half of the 1980s, this arrangement was no longer sustainable. Following upon this, the emergence of a forceful opposition to the PRI from the left and right contributed to disturb even further the corporatist arrangements between local power groups and the coalitions governing universities, regardless of their ideological affiliations.

This, of course, does not mean that public universities have become politically aseptic. Recent developments have by no means extinguished the political ambitions of rectors and their staff, who in many cases are learning to open new avenues for their political careers as public sector managers, based on their record as *modernizers* during their stint as university officials. This trend in the political culture is associated with the responses that officials had to develop in the face of increased criticism of the

public sector in general. Additionally, university leadership has had to learn to coexist with different parties when they come to power at the local level, with the implication that successful leadership must demonstrate a capacity for establishing collaborative relationships with politicians of various stripes.

In certain regions, state government began playing a more visible role in educational policy, either as a logical extension of the decentralization of basic education or because educational reform was put on the local political agenda by the main actors (such as parents' associations, the church or the business community). Some state governors have expressed support for higher education reform as a politically useful component of broader modernization policies.

Another fundamental shift in the political environment for public higher education has been the decline of university unions. Unionism was a central issue in university politics in the 1970s and the early 1980s. However, this situation has changed significantly, for three reasons. The first was a constitutional amendment in 1980 that confined university unions to single establishments—thus barring the formation of a national union—and limited their influence on hiring and promotion procedures for faculty. The second reason was the government's anti-inflationary policy (beginning in 1983 and extending to the present) which instituted controlled yearly wage increases on a national scale. This effectively deactivated strike activity by unions. Additionally, over the past decade, union doctrine went into crisis as a result of the ideological debacle of socialism. Unions today are present and often do exert a veto power against certain institutional policies, although their political clout is much diminished. Examples of this are changes in personnel policies and governance structures of some universities.<sup>13</sup>

Although the traditional political role of universities

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<sup>12</sup> The National University was the exception: a student movement defeated a differential fee proposal in 1992.

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<sup>13</sup> Individual productivity incentives for academics went through in spite of union opposition. In addition, in various institutions, statutory changes gave greater voting power in university councils to faculty and managers, reducing the representation of students and workers.

has lost credibility, their *visibility* has not diminished. Rectors, department heads, research directors, and individual academics are expected to cope effectively with increasing demands for accountability, evaluation and local fund-raising. Producing and using information are becoming more important concerns. Comparisons among public and private establishments are being made by politicians, the press and community leaders. The language of management and strategic planning is more visible in rectoral statements, official documents and public discourse in general.<sup>14</sup>

Table 3 summarizes the main shifts in the interactions among the principal players in public higher education.

### IS THE STATE COMING BACK IN?

What are the implications of these developments for emerging *state capacity* with regard to higher education in Mexico? Using Merilee Grindle's definition (1993), the ideal components of a capacity building process at the state level in countries undergoing market reforms include:

- C *Institutional Capacity*: Setting effective rules of the game to regulate economic and political interactions and asserting the primacy of national policies, legal conventions and norms of social and political behavior over local or corporate groupings.

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<sup>14</sup> To illustrate the change in mentality: the leadership development program co-sponsored by the University of Monterrey and the Harvard Graduate School of Education (Programa de Dirigientes de Instituciones de Educación Superior) has sold its services to 27 public universities (as well as numerous private ones) in Mexico over the past two years. The courses cover financial and human resource management, strategic planning, quality control and leadership development, topics that were traditionally almost totally absent from the concerns of public university leadership. Another indication: the language of economic modernization and its implications for higher education was on the lips of several institutional officials and academic leaders interviewed for this study.

- C *Technical Capacity*: The ability to set and manage effective policies with the support of well-trained analysts and managers, with an important role for technical input and information in decision making.
- C *Administrative Capacity*: The effective administration of basic physical and social infrastructure.
- C *Political capacity*: Effective and legitimate channels for societal demands, representation, and conflict resolution; responsive political leaders and administrators; societal participation in decision making.

Although changes have occurred to varying degrees on all these fronts, the most visible shift is probably the set of measures taken by the government to establish new rules governing its relationships with institutions of higher education. The latter had historically evolved under the influence of relatively benevolent public funding for autonomous institutions, in the context of a political game where financial efficiency and educational effectiveness had been consistently subordinated to the needs of the main political actors. The regulation of quality, equity and relevance by the state—for example, in terms of setting national academic standards for incoming students, differentiated wage scales based on productivity and evaluation procedures for institutions and programs—was alien to the system. Such forms of regulation are now in place and have been institutionalized under various forms, thus effecting changes in the *public sector environment* for higher education (Hildebrand & Grindle, 1994). It is fair to say, therefore, that new forms of institutional capacity have been created in the context of a more proactive government.

Between 1989 and 1991, old taboos were surpassed in a *hot* struggle among the main stakeholders of the old political arrangements in public universities. In some cases, institutional leadership was actually displaced and in others, agreements were reached with existing leadership. The manner in which the

conflicts generated by these reforms were managed and contained within specific limits speaks of a certain degree of political capacity for generating a new consensus for modernizing higher education.<sup>15</sup>

However, with respect to technical and administrative capacity (and especially information and management systems), the record is more ambiguous. Although institutions and government now produce and publish more data than previously, accountability and decision making based on systematic information have not found an unequivocal grounding throughout higher education institutions.

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<sup>15</sup> At a national assembly in 1990, rectors expressed considerable resistance to the recently announced evaluation programs. By 1992, most public institutions of higher education were implementing various evaluation procedures, some barely going through the moves and others actually publishing the results of institutional self-evaluations.



# Institutional Change: The Experience of Three Public Universities

Because higher education in Mexico is so institutionally diverse, making wide-ranging statements about the effects of these changes on universities and technological institutes is risky. One, however, can be made: the reform processes that have been taking place in various institutions during the 1990s would not have emerged—or would have encountered serious sustainability problems—in a different policy context and a different socioeconomic environment. Said modifications might not be considered *radical* departures in comparison with the Chilean experience of recent years,<sup>16</sup> but they touched such important nerve centers that change processes in various institutions were initiated and legitimated. This paper does not attempt to measure the Mexican experience using the Chilean model as a yardstick, as there are different ways of going about reform and the market approach is only one of them. Market orientation has not been the centerpiece of the Mexican reforms but rather one of its components.

In this context, administrative, financial, and governance reforms have emerged in various state universities where such issues had been traditionally ignored or pragmatically resolved. An interesting feature of this experience is that institutions where changes of this type are occurring include state universities with a turbulent political history and a reputation for sloppy management and lax standards of academic practice.

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<sup>16</sup> The Chilean higher education reforms of the 1980s and early 1990s are currently regarded as the prototypical radical policy shift in international literature (World Bank, 1994).

“Government policy pushes universities to work on administrative reform, which had never been an issue for institutional leadership. And administrative reform has everything to do with financial reform, that is, the way the institution obtains and uses resources. This is a crucial component of recent government policy.”

Vice Rector of Planning and Budgeting, University of Puebla.

Following is an examination of three such experiences of institutional turnaround: the state universities of Guadalajara (UdeG), Puebla (UAP) and Sonora (UNISON). The University of Guadalajara (in the state capital of Jalisco, in western Mexico) is the second largest university in the country, after UNAM, with 85,000 *licenciatura* students and 80,000 *preparatoria*<sup>17</sup> enrollments. The Autonomous University of Puebla (in the state of Puebla, 100 kilometers east of Mexico City) is the fourth largest, with a total enrollment of about 66,000 students.<sup>18</sup> The University of Sonora (in the Mexican northwest,

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<sup>17</sup> Upper secondary schooling originally developed out of university institutions, until the 1970s when the federal government created a separate system for *preparatoria*. Some public universities got rid of their preparatorias over the past 15 years, but in most cases enrollments in this level expanded very significantly throughout the 1970s and early 1980s. Currently about 30 percent of national enrollments at the upper secondary are in university preparatory schools. The two largest cases are UNAM (with more than 120,000 students) and UdeG.

<sup>18</sup> In 1993; since then, enrollments have been curtailed at both *preparatoria* and *licenciatura* levels, to a total of about 50,000.

bordering on the US state of Arizona) has a student body of about 20,000. The first two institutions make up 33 percent of national enrollments in university preparatory schools (not including federal upper secondary schools), and all three comprise 21 percent of national figures for undergraduates. They constitute 26 percent of postgraduate enrollments in Mexico. They hire 30 percent of all full-time faculty and receive 17 percent of total federal subsidies for public universities. (See Table 6 in the Appendix.)

The budgets of these state universities carry significant weight in their local economies. Generally, their budgets are very large in proportion to other local institutions; universities are usually the largest local employers of professional level and, often, clerical workers; and their expenditures translate into a weighty portion of regional consumer demand.<sup>19</sup>

“This university needs a new management culture, because we have come to understand that this institution is a large enterprise: it has a larger budget than the municipal government in this state capital. When this university pays its employees their Christmas bonuses, it makes the local banks tremble: we’re talking about a very large sum of money.”

Director of Planning, University of Sonora

The political influence wielded by these institutions is in proportion to their financial presence: rectors’ opinions and behavior are closely watched and reported by the local press; university unions and student movements were in the recent past important political actors; academics write in the editorial pages and talk on the radio on local political and social issues; the appointment of a new rector is considered a crucial event by the local political elite. Culturally, the presence of these institutions varies according to

institutional size, vitality and policy; the University of Guadalajara, for example, hosts an annual international book fair (one of the largest events of this kind in Latin America) and promotes ballet, concerts and exhibits. Other institutions, however, are less interested or successful in this area.

Until the late 1970s, public universities were the main channel for elite training, both in politics and business. However, the crisis of the public institutions and the development of private universities provided new options for educating the elites, especially in business. This shift had a deep influence on the institutional culture and the social image of public universities. While they were governed by the political left, this was considered a positive development and they advertised themselves as institutions of the common people. It should be pointed out that public universities became the training ground for an emergent group of local and national political leaders: officials and activists of the left opposition parties are almost without exception graduates of public universities. The same is true of mid-level officials in local public administration and the PRI.

One shared trait in their recent history is that all three institutions were run by the left in the 1970s and 1980s. Thus, they were considered *democratic* universities, whose statutes had been reformed to conform to the “one man, one vote” rule of governance, giving students and nonacademic staff considerable weight in governing councils. Unions came to wield significant influence at the institutional and also at the regional level. As a result of rapid enrollment growth in the 1970s, two of these universities (Puebla and Guadalajara) reached massive proportions, mostly through an open door policy of student admission for *preparatoria* graduates going on to the undergraduate level. Concomitantly, faculty hiring basically adhered to procedures set down by unions: incoming professors were not required to hold postgraduate degrees or have research experience, and promotions came with political negotiations between unions and university officials. Basically, these institutions continued to be undergraduate schools. Although new curricular offerings did appear, most students continued to choose law, administration,

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<sup>19</sup> A useful comparison in this respect: UAP hires about 6,500 clerical, academic and manual workers; the only largest employer in the Puebla region is Volkswagen de México (VW’s main plant in the Americas) with approximately 12,000 workers. Similar comparisons could be made for other mid size and large state universities.

medicine and civil engineering: enrollment expansion did not bring innovation. Postgraduate studies and research only became an issue in the 1980s, at a time when the prolonged financial crisis severely limited the possibilities of consolidating a scientific establishment. By the same token, technological development for local industry emerged only in exceptional case, usually under the impulse of lone entrepreneurial faculty members in some engineering schools.

A second common trait is that all three institutions experienced severe breakdown between 1989 and 1992. Protracted financial restrictions and their inability to generate entrepreneurial responses to this situation combined to push internal political arrangements to the breaking point. They went over the edge when government policy for higher education initiated its shift toward evaluation and conditional funding in the early 1990s. As the governing coalitions crumbled, factionalism took hold of the institutions. This led to political crises of considerable magnitude that filled the local, and at times the national press, for a year or more.

“These critical tendencies modified the relationship between the state and the university. The government began to allocate subsidies on the basis of academic performance rather than on the old corporatist negotiations. The dominant actors in the university lost the resources needed to sustain the system of internal clienteles. Then, an identity crisis developed throughout the university... As funding diminished throughout the 1980s, questions about the *meaning* of the university came to the fore and with this came a collapse of institutional morale. Financial scarcity made visible the severe academic and administrative disorder.”

M. Gradilla (1995), 345.

In all three cases, state and federal governments officials (governors, education ministers, and in some cases the President) became involved at some point in mediating or managing the conflicts. The means by which political management was handled in each case played an important role in the outcomes. The concerns at the federal level (Minister of Education and Vice Minister for Higher Education, the Rectors’

Association, and the President) were:

- C Containment of the crisis within local bounds, involving the governor and state legislature and thus avoiding its linkage with the national political opposition.
- C Sending in federal advisors to help set up new statutes or management systems.
- C Selective allocation of federal subsidies to the different institutional factions.

The media played an increasingly important role: extensive local coverage of these institutional conflicts helped to open up the university to external scrutiny. This seems to have created a crucial precedent from which there is no going back. From then on, building legitimacy through the careful management of the public image of the university seems to have become an important concern for the new leadership.

“As the behavior of the main actors [of the crisis of the University of Guadalajara] became open to public scrutiny, the conflict took on an unexpected dynamic. Internal affairs became matters of public record, and one could say that the university entered a phase of institutional *prophylaxis*. It could no longer be a *private matter*, limited to the influence of a few political families, but became a public issue for society as a whole.”

Gradilla, 353.

These were *hot* processes. The two basic dimensions that shape the fabric of these universities came under intense pressure. On the one hand, their existence as *public sector institutions*—funded by the public purse, endowed by constitutional law, and mandated with a social mission—was threatened by the national thrust to reform the relationship between the state and the economy. On the other hand, their legitimacy as *social institutions*—interwoven with local society at various levels and intensely involved with political groupings—had been seriously eroded as a result of internal struggles and the inability to develop entrepreneurial responses to a changed

environment. When both dimensions began to collapse, sharp struggles followed, exposing the universities to public scrutiny and opening the way for different types of leadership to emerge or intervene from the outside.

Once political conflicts were managed and new leadership was installed (between 1989 and 1991), institutional restructuring became the main issue. Following is a brief review of these changes.

### THE UNIVERSITY OF SONORA<sup>20</sup>

In 1991, after a protracted conflict over the attempt to raise student fees, an ad hoc committee of community leaders, experts from the federal government and academics was set up by the state governor to provide a framework for reforming the university. The local legislature approved reforms in the *Organic Law* of the university, providing it with a new system of governance, a different academic organization and new rules for funding and resource allocation. A Board of Trustees was formed, with members drawn from the faculty, the local community, and the state government; representation in the university council was modified, increasing the weight of faculty and reducing that of the student body. In the following two years, new statutes were drawn up to regulate student services, personnel, and expenditures.

The law establishes the obligation of the state government to provide funds and to honor university autonomy (which is protected by the federal constitution). The university is also legally required to generate additional income through student fees and other means.

Changes were specified in the structure of the university. The *facultad* system was replaced by departments which were assigned both teaching and research missions. New powers and functions were given to the heads of the two regional centers in the

north and south of the state, thus decentralizing the institution.

In 1993, the Board of Trustees recruited a new rector: a well regarded political scientist who had served as head of a local research center (thus going against the tradition of only recruiting leadership from within). The rector reorganized the administrative structure and developed new statutory frameworks and operational guidelines. Normative instruments were designed to regulate affairs in academic administration, personnel, expenditures and purchasing. High on the list of priorities was financial reform.

"A very important thing happened in the first year of this administration: we set our house in order. The situation was dramatic: the university had a "piggy bank" where money was kept and then spent as needs arose. There was no accounting, no control over bank accounts. The Board of Trustees demanded transparent finances. The new Law set up separate departments for treasury, comptroller and planning, and the rector's office began the task of organizing and regulating financial accounts. Setting things straight led us to discover that appropriate resource administration would allow the university to satisfy all its needs. Until last year, we had no idea of the institution's assets. Now we have a complete inventory of all property, donations and resources. Financial accounts were way behind schedule, and now we are up to date. We now have a structure that puts the planning department in the driver's seat, followed by the treasurer and the comptroller, each working separately in a system of checks and balances. With our on-line information system, everyone now has a clear idea of how resources are being used."

Felipe Mora, Head of Planning

The new financial setup also included specific fund management for: income from student fees and tuition payments and income from investments. Resources from the former are deposited in an institutional development fund, which generates financial reports twice a year and allocates resources to specific projects for improving the academic environment for students. High academic performance allows students partial or complete exemption

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<sup>20</sup> Founded in 1942 by local leaders in the professions and politics. For three decades it was funded by the state government. Since the 1970s, it has received funds from the federal government as well.

from fees and/or tuition. The investment fund is handled by a firm hired for this purpose. Evidence of these changes allowed the university to increase its income from state and federal subsidies, as well as the National Council for Science and Technology. All said, since 1992 university income from various sources increased substantially.

A fifteen-year development plan was formulated, covering enrollments, funding needs, faculty training, campus construction and new academic programs. Priorities and goals were set in the following areas: faculty upgrading, investment in infrastructure, upgrading student services, curriculum renewal at the undergraduate level, and development of research and postgraduate studies. Research centers developed a five-year strategic planning.

Accompanying these efforts came the thrust for administrative reform and leadership training:

*“There’s a new attitude, a new vision of university administration. When I began my stint as rector, I set out to build a professional management system, separated from factionalism and tribal struggles. We have been able to move in this direction under the banner of planning, financial order and performance... This is essential in the current transition phase the university is going through: it’s a crucial part of the rebirth of the institution.”* (J.L. Ibarra, Rector)

*“We must learn to think like a business enterprise, a very singular one, to be sure: an enterprise that ‘sells’ education, that produces trained professionals. Such an enterprise must submit to evaluation, use resources effectively and efficiently. The trouble is, most of us went from the classroom to management, with little knowledge of these things. So we went through management training—some of us attended the leadership seminar offered by the*

*University of Monterrey and Harvard.”* (F. Mora,

Director of Planning)

People in middle management also received training in fund-raising, information systems, and accounting techniques. The on-line information system contains data on university finances, enrollment, results of institutional evaluations and other dimensions. It can be accessed from all academic departments and areas of management.

Entrepreneurship was institutionalized in a Council for Community Relations and Technology Management, established in 1993. Its purpose is to develop R&D contracts and the sale of services, in connection with the university's research centers.

“We understand that regular operating subsidies from the government will not grow. So, we must be entrepreneurial, earning extra income and involving faculty and students in this effort. This has been very difficult, but we have learned that this effort helps to create a new institutional climate because reducing our dependence on government subsidies gives us freedom to develop new projects... Some of our departments are beginning to generate income on their own, through the sale of services, specialized courses and so on. Even in disciplines where this was unthinkable, it is happening, often by imitation: ‘See what your neighbor is doing: he just bought new computers with his own money.’ We are trying to do this without losing our social mission. Departments have an interest in this because they keep 80 percent of all locally generated income... But we are also working on a set of rules for cross-subsidizing so that departments with low entrepreneurial potential are not left behind.”

J.L. Ibarra, Rector

Stakeholder development also became part of academic planning. In order to create new professional programs, the decision was made to carry out consultations among local and national experts, business people, professional associations, and national evaluation agencies.

“Planning for a new department of architecture is under consideration. So we got in touch with the professional associations, which helped us carry out a statewide survey of needs in the construction business, generating very good data. This also allowed us to recruit professionally active architects as professors, who will help their students later on in finding jobs. Consultations were also made with specialists in the public sector and the Peer Review Committees (CIEES), in order to get a clear picture of what an up-to-date program should offer. Then we decided to open a small department of architecture, which will admit only 70 students a year. Naturally, some people went on hunger strikes to press for higher enrollment, but we stuck to our guns... We are now using the same procedure for two additional programs, in electronic engineering and computer science.”

Ibarra, Director of Planning

### THE UNIVERSITY OF GUADALAJARA<sup>21</sup>

An enormous institution that monopolizes public higher and upper secondary education in the industrial state of Jalisco (see Tables 5 to 7), the UdeG was controlled for many years by a student federation which had gone from PRI affiliation to leftist opposition in the late 1970s. The political function of the university took precedence over its social or educational functions. The university was a clear example of corporatist structures in Mexican politics: a publicly subsidized and socially massive institution run by a political organization which exerted physical and doctrinal influence over students and controlled university budgets without any accountability.<sup>22</sup>

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<sup>21</sup> Founded as a religious institution in 1792, it was shut down and reopened several times during the confrontations between liberals and conservatives in the 19th century. In 1924, the university was reinstated as a state institution under the banner of the Mexican Revolution: free, public and nonreligious education for the working classes (Gradilla, 1995).

<sup>22</sup> For anyone familiar with contemporary Mexican politics, this pattern should bring to mind similar arrangements that guided the fortunes of other important areas of the public sector, such as Petróleos Mexicanos and the Instituto Mexicano del Seguro Social.

Nonetheless, the university was able to develop a platform in some areas of research and development and to innovate in teaching at the undergraduate level in some professions (especially engineering). The financially tight 1980s were also a period in which a new generation of academics matured, always in tension with the way university politics was handled. During that period, attempts to reform the upper secondary schools (which cover the whole state of Jalisco) were made, with varying success.

As mentioned above, these unstable arrangements reached a crisis point and broke down between 1989 and 1992. The considerable political turmoil that ensued enveloped state politics intensely and led to the displacement of part of the old university leadership, allowing for the emergence of new political leaders who had been pushing for academic reform within the old system. Elections in the student federation and the university union put some of these people in charge, followed by a significant shift in representation in the university council. The refurbished leadership then initiated negotiations with the local legislature and the state governor in order to enact changes in the university statutes, such that representation by the union and the student federation was significantly reduced, limiting the influence of organized political groups. Autonomy was formally granted by the legislature, cancelling the governor's power to designate the rector. The new statutes made evaluation obligatory and established a board to which leaders from various social groups would be designated in order to develop stakeholders in the community.

Once this *political* shift had been effected, it became possible to push for academic reform. In 1994, a new rector was designated following the rules set down by the recently approved statutes. This change symbolized a shift in the political climate of the university:

*“The previous administration (1989 to 1994) had its hands full with the political phase of the reform movement. Now that the rules of the game have been modified we have entered a new phase in which our political problems are much more manageable, allowing the university to take a hard look*

*at itself. We're going through a kind of introspection on all levels, and this is reflected in the kind of leadership of our new rector. The previous rector was clearly a political leader and the current one is an established academic."* (Misael Gradilla, Executive Vice Rector)

In 1991, the university went through the first of three self-evaluations. The results of the evaluations were made public<sup>23</sup> and used to identify the main issues for reform. Between 1992 and 1995, significant structural changes were put into effect:

- C The university was decentralized into eleven *university centers* (six in the city of Guadalajara and five elsewhere in the state); each center was reorganized into departments associated with specific disciplines and professions (the center for engineering and technology, the center for medical sciences, and so on). Centers were made responsible for setting their own academic priorities and for developing financial plans. Their leadership was given statutory power equivalent to that of a rector.
- C Academic organization was formally changed into a department model; plans to develop flexible curriculum and a credit system were established; the basic goals are to allow students to follow courses in various departments (as opposed to the curricular strictures of the *facultad* system) and to focus faculty on both disciplinary and interdisciplinary activity; however, since implementation of these initiatives has proven to

be complex, university officials recognize that progress is uneven and will take longer than they originally thought.<sup>24</sup>

- C Administrative reform based on the introduction of an on-line management information system which is used to inform a planning and budgeting system.
- C The statutes pertaining to hiring and promotion of faculty were reformed to reduce cronyism and the leverage of the union.
- C Student admissions procedures were modified: the College Board was hired to apply examinations to all candidates, including graduates of the university *preparatorias*; now for admission, high school grades count for 40 percent and the results of the entrance examination count for 60 percent. This procedure eliminated the influence of the student federation, of *political recommendations* and of discrimination against students who were not graduates of the *preparatorias*:

*"What used to predominate was admission through political recommendations and pressure exerted by the student federation. Once we applied the College Board exam, all this changed, and I believe that for the first time students have been admitted on the basis of their academic ability... There were many problems, of course, there was a political reaction. The rector was even called up by people in the state legislature, but he went to Congress and convinced them that admissions were now a transparent procedure and that the protests were evidence that we had done a good job! One of the central definitions of the public university is that it must be open to anyone with talent, not an institution captured by special interests."* (M. Gradilla)

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<sup>23</sup> This is not a not a common practice. Universities have not been required by the government to publish evaluation results. The decision to do so is left to the university.

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<sup>24</sup> Three different responses to restructuring were reported: wholehearted acceptance (the engineers); going through the motions but avoiding deep curricular change; and outright resistance (in the social sciences). (D. de Santiago)

C In community extension and relationships, an array of arrangements were set up: a Social Council to bring in people from government, the private sector and community leaders in general; a Department of Technological Transfer in charge of a university center for R&D firms; a center for design and manufacture in small firms; a center for environment studies; and a university foundation to manage funds resulting from donations and the sale of products and services. In 1995, a study on sustainable development in the state of Jalisco was signed jointly by the university and leaders from government and industry and was proclaimed to serve as a framework for future university-community collaboration efforts.

C Financial management was significantly reformed: incremental budgeting based on political negotiation is out; basic operating budgets are now developed at the department level following institutionally defined priorities; budget proposals are then studied and approved by the central financial office on the basis of department performance on various indicators (which were designed by common agreement); project applications are also made by departments on a competitive basis for specific funds in research, postgraduate studies, curriculum innovation and extension; heads of decentralized centers are made accountable for the use of funds; individual departments are made responsible for developing their own sources of outside funding, and these efforts are rewarded by concurrent funds allocated by the central administration; an on-line information system showing priorities, indicators, department performance and funding is accessible by all departments.

Since political opposition to raising student fees posed a formidable obstacle, another strategy was devised to raise students' financial contributions:

*"We created a fund called Mejora for improving academic facilities and infrastructure. It's about rewarding faculty and student efforts to make their study conditions more livable. We thought this was*

*better than charging students fees on a scale graded by differential costs of study in, say, Medicine versus Literature—no public university has been able to do this reasonably. And then the political problem: imagine 100,000 students in the streets! So, we said to the students: 'Look, we won't raise fees but everybody does have to make some kind of contribution, so let's be transparent in our financial affairs and ask you, the students, to help your departments raise money for specific improvements. We will give you matching funds, and we'll put all the money in an account that your department head will handle under your supervision.' It worked. Departments all over the university started fund-raising campaigns, and in two months the university raised 2.5 million pesos!"*<sup>25</sup> (Diego de Santiago, Budgeting Officer)

This experience led university officials to the realization that new kinds of financial and information management could be used as tools for improving institutional climate:

*"We came to understand that a good information system and greater participation are great levers for change. They give students a window on what's happening elsewhere in the university and they give them influence on decision making. It helps us tell the student: 'Expand your horizon, there are new organizational cultures, new ways of doing things.' The same goes for faculty and administrators—you can see a new institutional culture emerging."* (D. de Santiago)

Traditionally, within the fragmented *facultad* structure, professors and heads of academic programs had no incentive (or even awareness of the need) to follow common rules of academic practice, in terms of student assessment, classroom practice and curriculum development. As academic organization was restructured, evaluations were carried out and students began taking courses in different departments, the need emerged to improve academic coordination above the department level. It became clear that someone had to be in a position to oversee academic

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<sup>25</sup> Approximately US\$130,000.

practice, supervise evaluation criteria, make suggestions to the executive vice rector, and respond to increasing student demands for attention. At various university centers, the academic council voted to create paid positions to carry out these functions:

*"We had never even thought of academic coordination as an institutional function before. Now we need people to set down criteria, pass on students' complaints to teachers... And this function has to be a full-time paid job, a position with clout. It's a gradual process, because it goes against the grain... but we have to move in this direction because restructuring has created a host of new problems."* (D. de Santiago)

## THE UNIVERSITY OF PUEBLA

Like the University of Guadalajara, the UAP has had many faces throughout its long history: in the eighteenth century it was an ecclesiastical seminary; in the nineteenth century it operated as a secular "state college" (*Colegio del Estado*) with elite training in the law and letters as its main function. During the first half of this century, it struggled to adapt to three overarching forces: the movement for autonomy (initiated by the National University in 1929); the search for an adequate balance between its mission as an academic institution and the expansive tendencies of the Mexican political system in its postrevolutionary phase of consolidation (1930s to 1950s); and the drive to move beyond its traditional status as a college for professional training to something resembling a modern university. However, the most profound changes occurred in the 1970s when the UAP abandoned its elite status as it opened its doors to increasing numbers of young people from the middle and lower middle strata. Expansion occurred amid increasing political conflict, resulting from the clash between Communist leadership in the university and the state government. When federal financial and political support for university leadership made it clear that the university had irreversibly entered a new phase, the local elites gave up the fight for the public institution and focussed their energies on developing private institutions. Expansion and politicization, thus, meant a radical shift in the

relationships between higher education and local society.

By the late 1980s, the UAP had more than 60,000 undergraduate and *preparatoria* students, more than 3,000 professors, 31 undergraduate and 12 postgraduate programs, and five research centers. However, increasing conflicts over governance and financial mismanagement placed the UAP in highly unfavorable contrast to the rapidly growing local private sector in higher education and revealed that it had reached the limits of the "democratic" model. Between 1989 and 1991, amid factionalist fighting over diminishing resources, the ruling coalition collapsed and the university became enveloped in a prolonged conflict.

As the fighting factions reached exhaustion, the state legislature intervened to reform the university statutes. The one-person-one-vote rule for designating directors and rectors was eliminated. The university council was put in charge, faculty representation on the council was increased, and the presence of nonacademic staff was reduced significantly. The new law also made significant reforms in management structure and labor relations. It created several vice rectorships with their respective advisory boards (for teaching, research, extension, planning and finance, and student affairs) and gave ample powers to the rector over hiring and dismissal of staff (thus excluding the union from this sphere).

The group that assumed leadership in 1990 was composed of *survivors of the cataclysm*, that is, political functionaries with lengthy experience in university administration (and thus directly involved in the crisis) who had been able to refurbish their image and maintain functional relationships with federal and state government officials in managing the crisis. There was, therefore, no renewal of leadership by substitution (as in the case of Sonora) but rather a *recycling operation* of existing leadership. Since attaining political stability was a fundamental issue, government officials accepted this formula in exchange for implementation of federal policy in the university. The policies for institutional reconstruction that followed were not internally generated but

rather imported from outside sources. In fact, all of the important measures taken since then have been the result of the application of federal programs and the implementation of proposals developed by hired consultants.

In addition to statutory reform and political stabilization, the university was required by the federal government to rationalize its personnel policy (De Vries, 1994). The immediate implication was the reduction of hired staff: between 1991 and 1993, 1,320 academics and nonacademic workers (mostly part-timers) were laid off.<sup>26</sup> Following this, a point-system was designed for promotion criteria, and an explicit policy was established to assign differential teaching loads to academics depending on their status as assistant, associate or full professors.<sup>27</sup>

Beginning in 1991, the university initiated a series of programs, following governmental guidelines: upgrading the curriculum, investment in infrastructure, teacher training, and piloting a management information system, among others. Two years later, at the request of the state governor, a team of experts was asked to carry out a global evaluation of the institution.<sup>28</sup> The experts produced an extensive report with a diagnosis of the main shortcomings of the university, as follows (ICED, 16-17):

- C General low quality in undergraduate education and services
- C Major inefficiencies in finances, human resources and the use of physical space; the report stated that “the two largest wastes of faculty and student time and everybody’s money are unusually high noncompletion rates (66 percent) and difficulty of graduates in finding employment in their field.”
- C Academic programs were backward, out of touch with reality and excessively narrow.
- C Almost total financial dependence on government subsidies and “a weak and fragmented management system that lacks vital internal cost, performance and other critical information.”
- C Neglect of external responsibilities, toward the community, local government and other components of the educational system.
- C Inequity in the treatment of indigent students.

The fact that such a blanket critique of major institutional flaws was made public represented a significant shift away from the inward-looking, defensive culture of the recent past. The report was instrumental in changing the terms of debate within the institution, sidestepping political issues and focussing on educational ones. It also included a series of proposals for reframing the university’s position toward students and the community:

*“What was the most important thing we got from our advisors? A development plan. We still have a long way to go but at least now we have an academic model, which we badly needed after the university collapsed. One of the principal aspects of this model is that it places the university in its context, it forced us to look beyond the walls of the institution at the demands of the local economy, globalization, the changing nature of knowledge... It also made us think about what our students should get from the university. Were they learning languages, computing, math? All this revealed to us*

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<sup>26</sup> The union went on strike to resist these measures but was unable to rally support and was forced to call off the strike. Subsequently, the rector questioned the legitimacy of the union and refused to sign the collective contract it proposed. Since that time, the status of the weakened union has been debated in the courts. For all practical purposes, it has ceased to exist.

<sup>27</sup> Between 1990 and 1991, all public universities were directed by federal officials to reform their personnel policies along the lines mentioned here. Salary scales were not unified, but all universities were ordered to establish a similar point system based on merit for promotion.

<sup>28</sup> The team was headed by Phillip Coombs and included Jean Pierre Jallade, Lord Walter Perry, Ricardo Diez Hochleitner, and Jacques Hallak.

*how badly we had been doing our job.”* (J. Vazquez, Vicerector for Budgeting & Planning)

Two important consequences followed. A new team of experts in curriculum design, management systems and planning was hired,<sup>29</sup> and a development plan was drawn up, covering eight issues:

- C Curriculum Reform: a credit system, common courses in basic skills and knowledge for all programs, honors system for students, planning based on labor market forecasts, and reform of the *preparatoria* curriculum.
- C Research and Postgraduate Studies: evaluation of current resources and feasibility planning for future programs.
- C Academic Standards: standards for admissions were raised and time-to-degree standards were instituted, as were common requirements for all graduates in languages and computing.
- C Upgrading the Faculty: retraining existing professors and hiring people with higher degrees.
- C Improving Academic Facilities: libraries, language and computer labs, remodelling the physical plant and new student facilities.
- C Management Reform: rationalization, statutory reform, information system, planning and budgeting system, personnel training.
- C Stakeholder and Financial Resource Development: a social council was set up to bring together leaders from the community in order to set long-term priorities for the university; a university foundation was created for developing additional sources of funds.

Since 1994, significant measures were taken in undergraduate education:

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<sup>29</sup> The Academy for Educational Development in Washington, D.C.

- C All undergraduate programs were evaluated; a credit system was designed; a common core of courses in languages, mathematics, computing and current affairs was set up.
- C The College Entrance Examination Board was hired to apply entrance exams to all students, including graduates of the university *preparatorias*,<sup>30</sup> thereby cancelling the open-door admissions policy: by 1994, the university was admitting 11,000 out of 19,000 applicants.
- C Enrollment caps were set in overcrowded fields: enrollments in law, accounting, medicine, dentistry and architecture were reduced by 60 percent.
- C Reforms were made in regulations governing the minimum number of courses and the maximum number of semesters in which a student is allowed to enroll on a regular basis.
- C Student fees were raised (increasing income from this source from US\$1 million to US\$7 million).

An external evaluation was made of postgraduate and research policy, leading to a development plan. Several new masters and doctoral programs were set up. By 1995, the UAP had 32 postgraduate programs, half of which met requirements by CONACYT for funding, which amounted to about

US\$5 million for that year. The UAP had established a significant capacity in postgraduate studies, compared to other state universities.

Examining university finances was an important part of the rationalization effort. An audit was carried out to determine what kind of income the schools and departments were producing, and officials were

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<sup>30</sup> The publication of the results of the first exam revealed the severe shortcomings of the *preparatoria* graduates, many of whom were not admitted to undergraduate programs. The following year, *preparatoria* enrollment fell by 50 percent, setting in motion a debate on how to reform the high schools.

surprised to learn that the university had earned US\$11 million from the sale of services in 1994. This had been going on for several years, but locally generated income was not reported and therefore not included in the global institutional accounts. Making this fact known set off various reactions: on the one hand, there was satisfaction that the public university had demonstrated its entrepreneurial abilities, but on the other, there was fear among department heads that the income they generated would be appropriated by the higher authorities. The rector and heads of departments reached an agreement to the effect that departments would report their income to the budget office and the rector would initiate a system of matching funds. Income has also increased more recently from sales in a university gasoline station and a university pharmacy (attached to the medical school).

The structure of the University's budget experienced important changes during the 1990s. In 1990 more than 90 percent of the University's income (most of which came from federal subsidies) was spent on salaries. In 1993, salaries accounted for 77 percent of expenditures and nongovernmental income had grown to about 10 percent of the total (UAP, 1995c).

As in the previous cases, a basic ingredient in this process was the government's funding policy. Whereas basic operating subsidies (such as base salaries and maintenance) barely grew at the pace of inflation, institutional innovations were rewarded with significant increments from the federal government's innovation fund (FOMES). From 1992 to 1995 the UAP received about US\$15 million from this source. The money was invested to support administrative reform, curriculum reform and new computing facilities and libraries (UAP 1995b). This amount exceeded similar allocations to other public universities.

"We took a hard look at the financial future of universities in Mexico and realized that public funding is just not going to grow. It's clear that the easy times are over, that close control of public expenditures is here to stay. Our government is overwhelmed with demands and higher education is not number one on the scale of priorities, so from that source we'll get barely enough for salaries, some operating expenditures and some innovations. Gone are the days when a university could get funds in return for promises—now, funding is based on results... The university has to think hard about its own value-creating possibilities, and there are many things to be done. But it's not easy to learn for a university like ours.

J. Vazquez

However, learning takes place in different directions and at different speeds. Assimilation of new systems occurs unevenly and carries a different meaning for various actors. Red tape and top-down styles of management are common. Elements of the old factionalist politics loom in the background:

*"I believe that the university is beginning to understand itself as an organization. We always had an ideological self-image but now everyone is trying to understand the complexity of this organization. But different people go about this in different ways. The upper echelons became enchanted with planning and management, as if solving the university's problems were a technical question! And people in academic departments have trouble understanding this, they feel overwhelmed with all the paper work involved in producing information. One department head asked me 'Am I supposed to manage my department or work for you?' This is a big problem when you initiate evaluation and management systems. We have to start working horizontally, not vertically, bringing people in from various areas to think about solving complex problems... But authoritarian culture doesn't understand that complex organizations and modern management systems require new ways of thinking. Fortunately, what keeps us moving ahead is a shared need to change. This created a sort of armistice among the warring factions... How long will it last?" (J. Vázquez)*

# Overview and Discussion

## A SUMMARY OF THE PRINCIPAL SHIFTS IN UNIVERSITY MANAGEMENT AND ORGANIZATION

University reform is presented here as a complex process of conflict and adjustment that restructures institutional power relationships and identities. It is an *intense learning experience* and a *delicate balancing act*. Before proceeding to a comparative analysis, it is useful at this point to sum up the main dynamics that can be found in the three institutional processes.

- C Important changes occurred in the political and social environment of Mexican public universities toward the end the 1980s. Two features stand out in this regard:
  - S A new policy framework emerged at the federal level, including basic changes in funding rules and the thrust toward evaluation. Selective spending for specific projects favored institutions that embarked on reform. This crucial development provided sustenance for emerging reform coalitions within some institutions.
  - S The idea of modernization had spread in social discourse creating a basis of legitimacy for change in public and private institutions generally. Specifically, it became permissible to revise the traditional corporatist notion of university autonomy in favor of concepts of fiscally responsible self-government and social responsiveness (relevance) as tenets of university doctrine.

- C The political and ideological fabric which had sustained these universities in their communities came apart.
- S These institutions were no longer seen as viable by local government and local elites. Their performance on basic tasks was perceived as anachronistic at best; their management practices were criticized as inefficient and even corrupt; politicization of rectoral succession procedures had become a common occurrence, resulting in fatigue and demoralization; private higher education had gained significant ground among the elites and posed new forms of competition to public universities.
- S The university crisis became a matter of intense public debate, and the subsequent political mobilization involved local government and private sector leadership as well as the media. In all three cases, the federal government allowed the conflicts to develop to a point where the old leadership had lost all social and intellectual legitimacy. It subsequently assisted state governments in devising new statutory and organizational arrangements for each institution. This government “intervention”—extremely unlikely under normal circumstances—was made possible and legitimate as a result of the visible inability of the institutions to handle their own affairs.
- C The conflicts over governance, internal resource allocation, and academic organization led to

revised institutional statutes. As these arrangements were being put in place, replacements in the leadership occurred. In two of the cases (Guadalajara and Sonora), the outcome of the political confrontation was the partial defeat of the traditional institutional coalitions, allowing for the inclusion of individuals with a strong academic background and a reform orientation. In the case of Puebla, the change consisted in the refurbishment of existing political chiefs who survived the confrontation by accepting new rules of the game.

- C The stage was then set for some basic rationalization efforts, attempting to set the institutions on a new operational footing. This first level of change, occurring over a two to three-year period, was carried out with direct external technical assistance and included:
  - S Implementing the statutory reforms and changes in the academic organization, which necessarily implied reordering the interactions and power relationships among the basic actors (faculty, students, administrators).
  - S Seeking new relationships with relevant external stakeholders and molders of opinion.
  - S Rationalizing financial operations: setting up budget procedures, studying costs, rethinking internal allocations, seeking additional funds outside public subsidies.
  - S Reforming the management structure.
- C Once the institutions had acquired a minimum of political stability and seemed to be operating on a new footing, a second set of issues focusing on academic reform per se began to emerge. Most of them are taken from the agenda of the federal government. Implementation, however, is being dealt with in different ways by each institution:
  - S Changes in the academic rules were partially

implemented: a common and pivotal theme was the reform of student admissions requirements; meritocracy in hiring and promotion for academics has *not* made significant progress in any one of the three institutions, although it is clear these decisions are no longer influenced by the unions.

- S The value of information increased, not only as an input for decision making but also as a means of persuasion and legitimation for ongoing reforms. This led to the question of accountability and transparency in financial decisions. These issues proved to have a very different value for each rector, depending on different styles of leadership. Whereas in Guadalajara and Sonora, information on basic institutional decisions (funding, promotions) is now made more widely available, Puebla has taken only timid steps in this direction.
- S It became clear to some members of the leadership that, above and beyond meeting basic efficiency requirements, administrative and financial reform could be seen as links in a chain of innovation. Changes in the funding rules forced a re-examination of other major issues, such as priority-setting, fund-raising, internal cost differentials and long range planning. Once again, important differences are evident in centralized versus decentralized methods of financial management and in the way fund-raising is handled.
- S These shifts were accompanied in Sonora and Guadalajara (in certain departments) by a more reflective attitude toward institutional strategy, in contrast to the hitherto mechanical application of government programs in Puebla. As some leaders began to ponder their institution's mission, their priorities for academic reform became more

specific. One of the indirect effects of rationalization is more complex thinking about the organization itself. This is the case with

officers in charge of financial matters and planning, although this attitude is not uniformly shared throughout the upper and middle echelons of leadership.

### **A COMPARATIVE VIEW OF CHANGES IN STRUCTURE, MANAGEMENT AND LEADERSHIP**

All of the themes mentioned are common to the three cases. However, the manner in which each institution perceived and acted upon them seems indicative of important differences in the paths followed. This section presents a more qualified view of the changes presented above by looking at how various political, organizational and academic issues were perceived and resolved.<sup>31</sup>

#### **Differences in Leadership Recruitment and the Reconstitution of Social Networks**

It makes a difference whether the new leadership was recruited from the outside, from respected academic circles within, or from surviving and refurbished members of traditional political chieftainships of the *ancien régime*, for whom family and tribe continue to be basic organizing principles.<sup>32</sup> Relative autonomy vis-à-vis the social and political networks that had developed over the years within each university turns out to be a significant variable in predicting the behavior of the new leadership. Although the confrontations produced winners and losers in all three institutions, the traditional clientele networks were

reconstituted in various degrees.<sup>33</sup> The defenders of the traditional political rationale now have to operate with the newly legitimate vocabulary of academic values. Thus, two rationales are present in uneasy equilibrium (and sometimes confrontation): the push for academic productivity and excellence and the defense of political clienteles rooted in the past.<sup>34</sup> Judging from the behavior and styles of leadership, the Universities of Guadalajara and Sonora have tilted this balance more toward the academic mode than Puebla.

#### **Differences in the Reconstruction of Institutional Control Systems, Task Structures and Climates**

Closely related to the previous theme are differences in decision making strategies and institutional dynamics associated with such options as participatory versus hierarchical governance, formalized versus constantly renegotiated legal frameworks, and high versus low internal and external accountability.

C UNISON: *New governance structure incorporating external stakeholders, a highly formalized legal framework and moderate accountability.* Precise and thorough redesign of university laws and statutes created a significant shift in the existing power arrangements, which have contained political conflict by balancing the internal groups against the increased involvement of external stakeholders. Although political authority has been moved upward and outward, the two regional campuses now operate within an unambiguous task structure and enjoy greater responsibility over local operations than before.

C UdeG: *Participatory governance in a decentral-*

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<sup>31</sup> Since the first version of this paper was produced, new visits were made to the Universities of Puebla and Guadalajara and telephone interviews were carried out with academics at the University of Sonora. Some of the preliminary conclusions of this paper were tested against the opinions of a small number of academic leaders at the middle level. This led to the following analysis.

<sup>32</sup> The current rector of UAP has been a university official since the 1970s; he has placed several family members in high positions and has maintained close personal control of important decisions. It is not insignificant that his cousin, the current vicerector for research and postgraduate studies, is in line to compete for the rectorship in 1997.

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<sup>33</sup> The idea that modernization is not necessarily antithetical to traditional politics but rather may even reconstitute the clientele networks that provide the social base for traditional politics is taken from Frances Hagopian (1994), "Traditional Politics Against State Transformation in Brazil," in Joel Migdal, Atul Kohli and Vivienne Shue (eds.).

<sup>34</sup> I am grateful to Ricardo Arechavala at the University of Guadalajara for his insight into this question.

*ized structure with a moderately formalized but constantly renegotiated legal framework and moderate accountability.* A moderate change in governance structure allowed traditional power groups to survive but generated enough momentum for new leadership to decentralize and restructure, tilting the playing field in favor of the academically competitive groups (as opposed to the *politically* competitive ones). There is an evolving rule and task structure, as the actors learn to manage a decentralized system. Planning is as yet ambiguously linked to budgeting and expenditures, but the decision has been made to establish a scheme of internal financial incentives linked to departmental performance. The regional campuses are developing momentum for local initiative, especially where academic leadership is strong.<sup>35</sup>

- C UAP: *Centralized decision making, unformalized framework, low accountability.* Governance structure was concentrated at the top, reducing the influence of students and unions and increasing that of officials and academics; but statutory formalization remained imprecise, giving the rector and his staff ample de facto powers over hiring and promotion, financial allocations, and the creation of new programs. The ambiguous rule and task structure, nonparticipatory planning, and hierarchical control over funding and information have tended to create a climate of low trust and high uncertainty, most likely leading to new periods of instability at the moment of rectoral succession and difficulties in promoting entrepreneurship at the department level.

### **Differences in One Dimension of Academic Organization: the Creation of New Programs and Curriculum Changes**

- C At UNISON, the rector and head of planning

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<sup>35</sup> I wish to thank Sonia Reynaga of the University of Guadalajara for her comments on this point.

present the governing board with a proposal to establish a new program after consulting among the business and professional communities.

- C At Guadalajara, academic changes are determined by the rector of each regional campus in negotiations with the general rector. Although internal clienteles are clearly behind some new programs, at the regional campuses entrepreneurship and growing links with local businesses play an important role in these decisions. On the other hand, the establishment of a new credit system for the whole university is being implemented centrally by the head of planning.
- C At UAP, the creation of a credit system, the establishment of common core courses for all undergraduate programs, and the creation of several masters and PhD programs are usually decisions made by the rector and the vice rectors, assisted by specially hired consultants.<sup>36</sup> Implementation is left to academics and receives scant further attention from higher authorities.<sup>37</sup>

### **Is There Renewed Institutional Capacity for Sustained Academic Development and Innovation?**

The institutions reviewed here have clearly taken important steps that enable them to rebuild the capacity they had lost to carry out basic university functions in teaching, research and extension. From the perspective of the economics of organization, this study has pointed to changes in the incentive structure (both internally and externally) for the upper and middle echelons of institutional authority. However, shifts in the internal labor markets for academics are actually quite timid in the three cases. Thus, the

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<sup>36</sup> The National Science Council (CONACYT) provides clear incentives for graduate programs that comply with certain indicators of quality and organization. There is evidence to the effect that some universities have taken advantage of this by reshuffling academics from existing undergraduate programs into the graduate level.

<sup>37</sup> I want to thank Wietse de Vries from the University of Puebla for his comments on this matter.

issue of reforming and strengthening the academic career has not been high on the agenda, whereas clearly the career patterns and inducements for administrators have been strengthened.

In some instances, at the department or regional campus level there is significant evidence of entrepreneurship and innovative fund-raising,<sup>38</sup> nevertheless, important differences in the rule structure and the institutional climate clearly have varying effects on local entrepreneurship. The political economy of these universities is in flux, as changes in the funding and authority structures create imbalances in the attempts by internal clienteles to capture and control institutional resources. In at least one case (Puebla) a process of recapture by traditional power groups seems to be occurring. From the perspective of institutional analysis, there has been a reordering of the *four I's of school reform*, as defined by Carol Weiss: interests, ideology, information and institutional environment. However, the structure of interest groups has shifted less than the other factors. Thus, the outstanding trait is imbalance in the impulse and orientation of change.

The initial premise of this study was that management reform and renewal of leadership are crucial preconditions for rebuilding institutional capacity. The results support this premise only in a conditional way. The first condition is that management reform was not the principal engine of change but rather a response—and a highly differentiated one—to the crises that enveloped these institutions. The second condition is that management must be understood here not as technical expertise (although demands on

management for technical ability have increased dramatically) but as *political* capability that turns out to be crucial in periods of institutional transition. These are periods when *structures* lose footing and *cultures* evolve, old leaders and values are questioned and new ones are revealed. This malleability of structure by culture occurs only during a short period. Once new structures are in place (or old ones are revived), the old cultures will attempt to take their revenge. Managing this flux is of crucial importance. It is an important attribute of successful leaders in this context to push this process of disequilibrium in new directions and to grasp this opportunity to institutionalize new values. There is clearly no uniformity in this process among institutions and even within them.

Therefore, a reasonable indicator of the direction and sustainability of these changes is the extent to which current leadership has been able to manage these imbalances and promote different types of leadership at the middle levels of university structure. Will these institutions develop deeper innovations, in terms of surpassing traditional structures in undergraduate curricula, research and development and community relationships? Based on the evidence of the three cases examined here, this has a greater chance of occurring where leadership will be able to meet the following challenges:

- C Avoiding the temptation of subordinating the need for experimentation to the pressures for increased political control.
- C Distributing emergent capacity for innovation more uniformly throughout the organization.
- C Capitalizing the experiences of academics who have participated in recent reforms for promotion into leadership positions and recruiting new talent to begin supplanting members of the old guard.

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<sup>38</sup> For a relevant concept of innovation in higher education institutions, see Burton Clark (1995): a) an institutional sense of direction: the construction of an innovative self-defining idea, an ideational element; b) an integrated administrative core; c) a discretionary funding base; and d) An innovative developmental periphery.



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## Annexes



Table 1  
Enrollment and Institutions by Sector, 1980 and 1993

	1980	1993	Change 1980-1993 (%)
<u>National Total</u>			
Number of Institutions	208	408	96%
Total Enrollment	726,862	1,135,801	56%
Women Enrolled	217,275	496,060	128%
<u>Public Institutions</u>			
<i>Universities</i>			
Number of Institutions	41	46	12%
Total Enrollment	536,991	708,839	32%
Women Enrolled	165,669	317,881	92%
<i>Technological Institutes<sup>a</sup></i>			
Number of Institutions	64	101	58%
Total Enrollment	92,567	189,219	104%
Women Enrolled	16,766	64,714	286%
<i>Technological Universities<sup>b</sup></i>			
Number of Institutions		3	
Total Enrollment		924	
Women Enrolled		382	
<u>Private Institutions</u>			
<i>Universities<sup>c</sup></i>			
Number of Institutions	26	55	112%
Total Enrollment	71,001	148,964	110%
Women Enrolled	24,228	66,614	175%
<i>Non-University Institutions<sup>d</sup></i>			
Number of Institutions	77	203	164%
Total Enrollment	26,303	88,296	236%
Women Enrolled	10,612	46,910	342%

Not included: Public and private normal schools.

- a) 4-year programs, *licenciatura* degree for engineers and administrators; centrally regulated by Ministry; located in medium size cities in the provinces.
- b) two-year vocational programs; regulated by Ministry and state governments; created in the 1990s.
- c) Degree offerings in more than three different knowledge areas, more than 1,500 enrollment; good academic facilities; some research and numerous programs in executive training, specialized services to firms, etc.
- d) Small institutions specializing in administration, tourism, languages, poor infrastructure.

Data source: Asociación Nacional de Universidades e Instituciones de Educación Superior. Based on tabulations in Kent (1992), Kent (1995).

Table 2  
**Federal Subsidies for Public Institutions, 1980-1993**  
(millions of US\$)

Year	Universities	Technological Institutes	Normal Schools	Total	% GDP
1980	710	300	134.9	1,314.19	0.68
1985	520	230	71.8	862.76	0.48
1989	510	230	70.1	839.41	0.40
1990	620	280	92.4	1,028.70	0.43
1991	830	360	110.3	1,347.29	0.47
1992	1,030	420	127.2	1,662.67	0.51
1993	1,160	510	143.3	1,914.11	0.53

Not included: Expenditures by state governments and private expenditure.

Source: C. Salinas de Gortari, V Informe Presidencial, 1993.

**Public Expenditure in Science and Technology**  
(millions of US\$)

Year	Total	% GDP
1980	835.2	0.43
1985	634.7	0.35
1989	563.9	0.27
1990	720.7	0.30
1991	1,044.1	0.36
1992	1,139.2	0.35
1993	1,375.0	0.38

Includes: CONACYT, public research centers, research in universities.

Source: C. Salinas de Gortari, V Informe Presidencial, 1993.

Table 3  
**Shifts in Relationships and Values  
Among Basic Actors in Higher Education**

1970s to 1980s	1990s
<p><i>Rectors</i> as coalition chieftains and powerbrokers.</p> <p><i>Unions</i> mobilized for wage raises and influence.</p> <p><i>Student groups</i> demanding free access and influence.</p> <p><i>Political parties</i> mobilized within universities, the only politically liberal zones of an authoritarian political system.</p> <p><i>Federal government</i> as “benevolent” funder and seeker of political stability.</p> <p><i>Association of rectors</i> as political buffer for resolving major conflicts and as formal vehicle for legitimizing government plans.</p>	<p><i>Rectors</i> as managers, interested in stability, competition for funds and public respect.</p> <p><i>Scientists and academics</i> participating in evaluations, funding decisions and development strategies.</p> <p><i>Individual students</i> as clients and investors, interested in jobs.</p> <p><i>Businesspeople and donors</i> not always interested but sought out by university leadership.</p> <p><i>Federal and state governments</i>: selective funders and (discursively) guardians of quality and efficiency.</p> <p><i>Association of rectors</i> still a legitimating buffer, but moving to adopt modernization discourse.</p>
<p>Demand-led expansion: regulation by political relationships and entitlement pressures.</p>	<p>Expenditure-led policies: regulation by incentives to adopt government policies.</p>

(Based on Kent, 1994)

Table 4  
**Sonora, Jalisco and Puebla: The Educational Profile, 1993**

	Sonora	Jalisco	Puebla	National Total
Basic Education <sup>a</sup>	412.1	1,245.6	1,001.9	18,890.6
Vocational Instruction <sup>b</sup>	22.2	95.5	29.6	429.0
Upper Secondary <sup>c</sup>	54.0	116.5	80.2	2,209.7
Higher Education: <i>Licenciatura</i>	38.0	114.6	87.0	1,078.2
Higher Education: Postgraduate	1.1	3.4	2.2	42.0
Schooling Rate in Higher Education <sup>d</sup>	18.3%	19.1%	24.6%	13.5%
Individuals over 18 without Higher Education	89%	89%	89%	88%
Illiteracy in Individuals over 15	6%	9%	19%	12%
Children 6 to 14 not in School	7.8%	12.8%	16.6%	13.4%
Total Population	1,823.6	5,302.7	4,129.1	81,249.7

a) Primary + secondary schooling.

b) Middle vocational schooling.

c) Preparatory (high school)

d) Enrollments / 20-24 age group.

Source: SEP, Estadística Básica del Sistema Educativo Nacional, 1993-1994.

Table 5  
**Sonora, Jalisco and Puebla: The Economic Profile, 1994**

	Sonora		Jalisco		Puebla	
<i>Gross Product</i> <sup>a</sup>	\$10,746,400	100%	\$26,463,400	100%	\$12,121,600	100%
Primary Sector	\$ 1,756,500	16%	\$ 2,938,900	11%	\$ 1,195,100	10%
Industrial Sector	\$ 3,281,700	31%	\$ 8,997,800	34%	\$ 3,911,400	32%
Tertiary Sector	\$ 5,809,300	54%	\$14,990,700	57%	\$ 7,146,600	59%
G.P. per capita	\$5,893		\$4,991		\$2,936	
<i>Working Population</i> <sup>b</sup>	545.6	100%	2,014.8	100%	1,051.5	100%
Primary Sector	135.9	25%	238.6	12%	406.4	39%
Industrial Sector	134.9	25%	504.1	25%	263.9	25%
Tertiary Sector	274.8	50%	757.5	38%	381.2	36%

a) Thousands of pesos. Exchange rate: 3.7 pesos/US dollar (approx.).

b) Thousands of individuals above 15 years of age.

Source: Carlos Salinas de Gortari, VI Informe de Gobierno, 1994.

Table 6  
**Three Universities: Enrollments, Faculty and Income**

	Guadalajara	Puebla	Sonora	National Total Public Univ. <sup>b</sup>	1+2+3/4
<i>Enrollments: Total</i>	186,010	66,526	20,539	1,048,889	26%
Preparatoria (Upper Second.)	80,475	16,737		293,032	33%
Postsecond. Technical Programs	17,659		3,717	30,700	70%
	85,221	49,160	15,940	708,839	21%
Undergraduate	2,655	629	882	16,318	26%
Postgraduate					
<i>Faculty: Total</i>	8,525	3,144	1,683	67,361	20%
Part-time professors	3,031	1,846	953	47,972	12%
Full-time professors	3,766	1,298	730	19,189	30%
Assistants	1,728				
<i>Income<sup>a</sup></i>	\$451,074	\$222,608	\$138,220	\$4,342,127	19%
Federal subsidy	\$225,468	\$164,483	\$ 58,467	\$2,619,819	17%
State subsidy	\$208,124	\$ 41,121	\$ 74,777	\$1,288,435	25%
Fees, services, donations, etc.	\$ 17,482	\$ 17,004	\$ 4,976	\$ 433,873	9%

a) Thousands of pesos.

b) Does not include other sectors, such as technological and private institutions.

Based on SEP/ANUIES, Agenda Estadística de la Educación Superior; UNISON, Informe del Rector, 1993-1994; El proceso de la reforma académica en la Universidad de Guadalajara, 1989-1993.

Note: Figures for 1995 have changed. Universidad de Puebla has reduced enrollment (to about 40,000), and all three institutions have increased their own income from fees and services. Research and postgraduate programs have grown in all three.

Table 7  
**Three Universities: Academic Units and Geographical Distribution**

<b>Universidad de Guadalajara (5 campus state wide)</b>									
	Preparatoria		Technical		Undergraduate		Postgrad.	Research # centers	Cultural Extension # centers
	# schools	# programs	# schools	# programs	# facultades	# programs	# programs (a)		
Regional	18	1	3	9	4	11	0	2	0
Guadalajara									
Metrop. Area	13	1	5	22	26	44	34	27	4
Total	31	1	8	31	30	55	34	29	4

<b>Universidad de Sonora (3 campus state wide)</b>						
	Short Cycle		Undergraduate		Postgraduate	Research
	# centers	# programs	# depts.	# programs	# programs (a)	# centers
Regional			6	12	2	2
(Hermosillo)	2	5	14	29	10	11
Total	2	5	20	41	12	13

<b>Universidad Autónoma de Puebla (1 main campus and 2 regional schools)</b>							
	Preparatoria		Undergraduate		Postgraduate	Research	Cultural
	# schools	# programs	# schools	# programs	# programs (a)	# centers	Extension # centers
Regional	2	1	2	2			
State capital							
(Puebla)	7	1	15	29	12	5	1
Total	9	1	17	31	12	5	1

(a) Does not include “Especializaciones” (short training programs).

Source: Carlos Salinas de Gortari, VI Informe de Gobierno, 1994.

Table 8  
**Institutional Restructuring: Three Universities**

<i>ISSUE</i>	<i>UNISON</i>	<i>U de G</i>	<i>U A P</i>
Student Admissions	Selective examination .	Examination + high school record.	Selective examination.
Enrollment Caps in Overcrowded Professions	Yes	No	Yes
Increase in Student Fees & Tuition	Significant. Discounts for good academic performance.	Moderate increase.	Moderate increase in tuition, significant in fees.
Financial Reform: Accountability, Budgeting Linked to Priorities & Performance	Significant	Significant	Moderate
Explicit Regulations & Incentives for Generating Extra Income	Yes	Yes	Under consideration.
Long-Term Institutional Development Plan	Yes	Yes	Yes
Participatory Planning	Yes	Yes	No
Reformed Governance Structure	New Board of Trustees; more power to rector, dept. heads & academics.	Autonomy legalized; indirect election of rector; unions, student federations retain minor influence.	More power to rector, dept. heads, academics; indirect election of rector; unions lose.
Institutional & Regional Decentralization	Yes	Yes	No; central administrative apparatus grew.
<i>Department Structure Replaces Facultad</i>	Yes	Yes	No
Changes in Undergraduate Curriculum	Dept. evaluates & effects changes + consultation with the professions.	Dept. evaluates & effects changes; moves toward student mobility.	New common core in language, math, current affairs.
Reform of Faculty Hiring & Promotion Procedures	Federal performance incentives; no significant statutory reform.	Federal performance incentives; new statute for faculty.	Federal performance incentives; no significant statutory reform.
Support for Research & Postgraduate Studies	Yes, based on priorities and performance.	Yes; based on priorities and performance.	Yes, but unclear allocation rules.
Stakeholder Development & Community Extension	Significant	Significant	Low