

# MEXICAN FEDERAL POLICIES FOR HIGHER EDUCATION<sup>1</sup>

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This chapter aims to describe the general changes<sup>2</sup> in higher education policies in Mexico from the mid 1980's to the present in terms of rules that federal governments have established for both state governments and institutions of higher education. We understand the rules to be made up of constraints and incentives that guide decisions at different levels of the higher education system. Institutional rules are nested within a framework of federal and state rules. The hierarchy and types of relationships among the three levels of governance in higher education is a principal focus of difference in the AIHEPS study. In Mexico, it is the case that, although in recent years state governments have increased their level of intervention in higher education, the federal government has been mainly responsible for regulating and funding public higher education.

## The Federal Context

### Design and Governance

The rules presiding over Design and Governance in Mexican higher education have changed very significantly over the past fifteen years. Higher education-government interactions were repositioned from continuous negotiation under conditions of cyclical conflict in the 1980's to a new situation in which the game developed relatively stable and legitimate rules formally associated with a discourse of quality and efficiency. At the end of the 1980s a series of critical issues for Mexican higher education had been identified by government documents and public debate as follows:

- The inexistence of clear funding criteria
- Inadequate information systems
- The absence of accountability procedures.
- Unclear standards for new program approval and improvement
- Recurrent conflict in public universities over designation of rectors and internal funding allotments.
- Feeble innovation and links with industry.

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<sup>1</sup> This chapter was written on the basis of earlier reports by Ramírez, R. (2002). Public Policy and Higher Education Performance in the State of Guanajuato. New York, New York University: Alliance for International Higher Education Policy Studies, Kent, R. (2005). Public Policy and Higher Education Performance in the the State of Puebla, AIHEPS, Medellín, R. (2005). Public Policy and Higher Education Performance in the State of Nuevo León, AIHEPS.

<sup>2</sup> The emphasis will be on the shifts experienced by the system and policies of higher education over time rather than on a description of the current situation, following the premise that changing the "rules of the game" is as much a question of continuous adaptation and negotiation within the system of higher education as it is one of singular decision-making at a given point in time.

At the level of the federal Secretary of Education, two separate Undersecretaries for Higher Education were in charge of public universities and public technical institutes respectively. Normal schools, which had been upgraded to four year diploma granting institutions in the mid 1980s, were under the purview of a different authority, the Undersecretary for Basic Education<sup>3</sup>. The fragmentation of federal authority for higher education along sectoral lines was in line with the semi-corporatist trends that characterized the organization of the state in Mexico throughout the twentieth century: various sectors of society were vertically “organized” or incorporated into specific areas of the state apparatus, each of which operated on different criteria. At the top, a powerful Executive supervised the various sectors, served as the mediator for the inevitable conflicts, and on occasion intervened on behalf of specific interests.

Although all state universities in Mexico originated in the late nineteenth or early twentieth centuries as creations of state governments, the role of the latter was eclipsed by the federal government as of the 1970s when first wave of expansion in higher education became too costly for the states to fund on their own. Nonetheless, most state universities continue to receive a variable part of their subsidy from local governments.

The federal and state legislatures have until recently played a minor part in regulating higher education, apart from the annual funding allocations. The courts, for their part, have not been regarded as a means for adjudicating differences in higher education policy, although as of the late 1990s a growing number of individual cases have been brought before the courts.

Taken as a whole, governmental action in higher education in this context was more a series of ad hoc decisions, framed by financial possibilities and constraints and often influenced by political transactions.

The reforms effected since the late 1980s were a notable turnaround in this *transaccional* mode of governance<sup>4</sup> in the higher education system. Changes in the following major areas of policy were brought about:

- Funding
- Labor relations and contracts
- Quality evaluation and control
- Organizational development, planning and information systems
- System coordination
- System design

Although the attributions of the federal government have grown considerably in recent years and it continues to be the chief initiator of higher education policy, it is no longer the principal, and the internal structure of the federal policy making apparatus has been consolidated into a single Undersecretary for Higher Education as of 2004. State governments now have a growing role. In some states, governors have created offices and commissions for planning and regulation in higher education. Governors are sought out by federal officials in the process of creating new state-run

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<sup>3</sup> This report will not cover Normal Schools.

<sup>4</sup> The author wishes to thank Dr. Juan Zorrilla from UNAM for his ideas on this point.

institutions, such as technical institutes and universities, and authorizing new private colleges and institutes. State legislatures now have a new role in the approval of funding for such institutions. Governors have created state commissions for science and technology, with a view to developing university-industry relationships. In some instances, private institutions of higher education have had recourse to the courts in suits against state government's approval procedures of authorization for new programs. Entrance and professional qualifying examinations are now administered by an independent organization. External evaluations of undergraduate and postgraduate programs are also carried out by organizations not affiliated with universities.

It is important to point out that the changes mentioned above were carried out without a single reform to the federal legal framework for public higher education. The federal *Law for the Coordination of Higher Education* has remained unchanged since its promulgation in 1982. The documentary evidence for the numerous decisions made throughout the past decade consists mainly six-year plans all incoming federal administrations are required to produce and of planning documented that are developed for specific issues by the two Undersecretaries for Higher Education (up to 2004). The only exception to this was the promulgation of the "Law for the Development of Research and Technology" by the federal Congress in 1999, but this document had little effect on the basic operations of higher education. At the state level, the legislatures of Guanajuato, Jalisco and Puebla have promulgated laws to set up councils for research and development.

For the most part, policy was developed by federal officials and then negotiated with the rectors' association. Since ANUIES receives a significant subsidy from the federal government and the Undersecretary for higher education usually has influence over the designation of ANUIES' general secretary, the association is not truly an independent body representing the rectors but rather a mediating organization for consultation and conflict resolution. This interaction is an important component of the political game surrounding higher education policy in Mexico, especially for the university sector.

One broad but significant outcome of this process is that the federal government has increased its influence over decisions made by rectors and directors, especially in matters of funding and budgeting. Conflict within universities and with the government has been brought under control. Rectors rarely develop their own programs for their universities but rather implement federal programs in response to the "fiscal carrot". Fiscal policy has been used to increase federal influence.

### **Planning and Priorities**

Throughout most of the second half of the twentieth century, during which the system of higher education developed as such, the planning role of the federal government had three different faces: public universities, autonomous by law and mostly chartered by state legislatures, were federally funded but mostly left alone to develop on their own; public technical institutes, on the other hand, were zealously controlled through a minutely structured federal bureaucracy, which managed the curriculum, faculty, and enrollments; finally, the private sector has always enjoyed de facto autonomy, being neither federally funded nor subjected to governmental regulations, save the

initial licensing procedures. These different sectors and the different forms of governmental relationships that characterized them represented the accumulation of decisions taken over the years rather than a coherent policy for higher education.

Since the early 1990s, however, new forms of federal involvement in institutional planning have developed, an interesting contrast with the rest of public policy leaning heavily in the neoliberal direction. It was widely recognized that the rapid and unregulated expansion of public universities in the 1970's and early 1980's had led to improvisation in the academic profession, low standards, and inefficient institutional management. A consensus emerged toward the end of the "lost decade" of the 1980's that the government had been unsuccessful in attempts to regulate and establish basic rules for public higher education and that the newly expanding private universities were a response to *public sector failure* in higher education, where low quality and relevance, insufficient funding and poor management had reached a crisis point. The consensus pointed to a general incapacity in government to set priorities and establish basic rules for institutional behavior. The last 15 years have been witness to continuous federal activism in higher education.

Throughout this period, successive programs have been implemented to control and audit regular subsidies, to allocate institutional development funds competitively, to create information systems, and most recently to implant strategic planning in public institutions of higher education. Currently, in order to be eligible for special funding (that is, in addition to regular operating subsidies), each institution must develop detailed development plans for each department or faculty to be submitted to the federal government. Evidently, an expanding bureaucracy is now needed to review each plan and reach agreements on specific funding contracts with each institution. Strategic plans are, in fact, relatively "unstrategic" since they are formulated on a yearly basis and must follow strict federal guidelines with regard to goals and programs. The actual amount of funds allocated on this basis has grown since 2001, the first year of its implementation, but as yet it represents no more than 3% of total institutional income for most establishments.

### **Information**

The production of valid data on the system and its performance had traditionally been neglected. For several decades it was the rectors' association (ANUIES) that took upon itself the task of collecting and disseminating information on enrollments, personnel and institutions in the university sector (both public and private). The National Statistics Institute (INEGI) is empowered by law to collect information from individuals, organizations and firms, and the federal Secretary of Education is similarly authorized to collect data by means of a standard format distributed throughout the school system at all levels. However, the information thus gathered basically serves to count the number of students, teachers and schools.

Throughout the two decades after 1970 public universities gathered their own data using varying methods. In the traditional procedure of subsidy allocation based on political negotiations over enrollment data collected and reported by the universities themselves, the issue of information had always been politicized. The separately managed sector of technical institutes has its own system of data collecting, and the Undersecretary for Technical Education (whose office was merged with that of the

Undersecretary for Higher Education, in charge of universities, in 2005) made use of that data in ways that were not explained in our interviews. Opacity and fragmentation within the federal bureaucracy prevailed. The custom was to subordinate the use of information to political decisions, rather than utilizing it as an input.

The advent of evaluation and performance funding made these failings glaringly obvious, and although the lack of a reliable information system continued to undermine the evaluation process, it was not until the early years of this century that federal officials took some steps to remedy the situation. The Fox administration moved away from previous conventions and made a point of producing and releasing data on governmental programs. With respect to education and higher education the following may be noted:

- A National Administrative Reform Program implemented throughout the federal public administration, including public universities, developed new management techniques and created information systems.
- In 2001 the federal Undersecretary for Higher Education developed a strategic planning initiative (PIFI) for all higher education institutions receiving federal funding, which made intensive use of performance indicators.
- The National Center for Evaluation (CENEVAL), which operates independently from federal official to develop and apply entrance examinations for upper secondary and higher education, started publishing its global results as of 2000, although data was not shown associated with specific institutions.
- In 2001 the Fox administration and federal legislators supported the establishment of a National Institute for Educational Evaluation (INEE) to assess performance of students in K-9 education. The Instituted continuously makes its results public.
- The release of the results of the first round of the Program for International Student Assessment (PISA), that placed Mexican fifteen year olds at the lower rung of performance on an international comparison, provoked strong reactions in the media and was henceforth seen as a basepoint for comparing educational performance.

Performance indicators have been designed by federal officials but they are mainly applied in funding the yearly strategic plans of each institution, which as mentioned above represents a small proportion of overall income. Rather than specify desired outcomes, policy makers in Mexico have developed new ways to manage and control inputs, such as personnel and facilities.

This is not the case for CONACYT funds for approved graduate programs: to be eligible for scholarships and development funds, graduate programs must meet a series of publicly known standards pertaining research productivity and PhD completion by academic staff.

Therefore, from the available data, it is not easy to discern whether greater federal influence translates into better performance of institutions in the fulfillment of policy goals. This is especially the case in matters of quality, since outcome measures in this area are particularly scarce.

## **Student Access and Achievement**

The question of access must be examined in the context of several waves of higher education policy reform as of 1990. Access and equity started out as secondary issues and have progressively climbed to a prominent position on the agenda since that time.

Throughout the 1990s and up to the present, there has been a growing demand for higher education in all regions of Mexico. The demographic causes are evident: the 15 to 24 year age group continues to expand, whereas all other age groups (except for those above 60) have stopped growing. This represents a singular turning point in Mexico's demographic history, which was characterized during the second half of the twentieth century by very rapid population growth. Currently the overall growth rate has been reduced to about 2.3% yearly, as a result of a consistent demographic policy implemented since the 1970s. Nonetheless, the tail end of this expansion is still active, thus producing large numbers of young people of university age for at least until 2020.

Additionally the educational reforms at the primary and secondary levels – which have clearly been the chief goals of federal policy throughout this period – began to produce greater numbers of secondary school leavers toward the end of the 1990s.

Notwithstanding these demographic pressures, the agenda for higher education policy during most of the 1990s was directed mainly at another set of issues: the revitalization of the basic rules governing the management and the quality of the higher education system. Thus, quality improvement, competitive funding and upgrading faculty took precedence over expansion and equity.

The decision to restrict access and control quality in public universities and at the same time to relax criteria for program authorization and institutional licensing in the private sector, thus allowing the latter to absorb the growing numbers of secondary school leavers, was clearly taken in the context of the prevailing neoliberal perspective. The policy consensus at the time called for deregulation, privatization, tariff liberalization, and downsizing of the public sector, in the hope of expanding the export economy and paving the way for the North American Free Trade Agreement, signed in late 1993. Democratization, which has been a prominent political issue in Mexico, was not perceived in its social and educational implications at that time.

The second wave for higher education reform emerged in the late 1990s and was closely linked to the OECD report on higher education (OECD, 1997). This document, which rapidly became an influential reference point for policy, made a strong critique of inequity in Mexican higher education, its lack of responsiveness to the economy and its limited institutional diversification. It supported the expansion of Level 5 postsecondary institutions and creating a system of credit recognition for student transfer. Federal policy makers responded to most of the OECD recommendations, some of which were already on the table, such as the expansion of the so-called Technical Universities, the new two-year institutions which were located in under-served areas of low income population. Federal attempts to promote student mobility through credit recognition met with resistance in universities and were only partially successful in the federally controlled technical institutes.

It was not until the Fox administration (2000-2006) that other pending issues related to access and equity were put on the table. The main policy document for higher education of this administration (SEP,2001) made a point of redefining the concept of quality that had prevailed until then by shifting it to mean improvements in student learning, student mobility, and curricular flexibility. It also placed significant emphasis on improving equity and access, especially through a new national scholarship program for needy students enrolled in public institutions.

Additionally, there has been mounting public criticism of the erratic expansion of private institutions and its implicit role in taking up students that fail to enroll in public universities. This criticism has focused both on the poor quality of these establishments and on the obvious inequities faced by low income students who, failing the entrance exam in public universities (where fees are low and scholarships are available), face the prospect of paying for a low quality education in the new private establishments.

The first issue – poor quality due to lax licensing criteria – has been acted upon by both federal and state governments, which have begun to tighten authorization procedures and have even closed down poorly performing private institutions. But the second aspect – the social inequities of a system that decided to restrict access to public universities while promoting it in the private sector – has met with a policy limited to increasing funding for the national scholarship program, a response that only benefits students who are already enrolled in public institutions but neglects many other secondary school leavers whose numbers are on the increase. According to a recent evaluation of PRONABES, the national scholarship program (Bracho 2005) slightly over 44,000 scholarships were awarded in 2001, the first year of the program, and in the 2003 academic year a total of over 122,000 scholarships were awarded (including renewals and new awards). Funding for PRONABES has increased from US\$42 million in the first year to US\$126 million in 2003. Part of these funds has been used to support students from indigenous backgrounds, in addition to funding from the Ford Foundation through its Program on Pathways to Higher Education. As of 2005, ten universities have special programs for aiding indigenous students with stipends as well as remedial academic support.

Another response, the increased funding for new two year technical universities, does provide access to low income students in semi-rural areas, although the small size of these institutions limits its social impact.

Thus, only recently have matters of access and equity been placed prominently on the agenda for higher education policy. This shift has been a response to both OECD recommendations as well as to concerns over the slow increase in the percentage of 19 to 23 year olds enrolled in higher education. Clearly, the “modernization” agenda has evolved from an emphasis on quality and effectiveness, which proved to have disappointing impacts on equity goals, to a more diversified perspective including specific programs for improving social coverage.

### **Fiscal Policies**

Until the 1990's the main source of funding for public universities and technical institutes were direct federal subsidies, which usually resulted from yearly political negotiations with rectors. Funding for special projects, scholarships or good performance was non-existent. Few universities charged fees or tuition nor were they in the habit of selling services to the business community, although some did receive part of their funding (usually not more than 30% of the total, with high variations among states) from state governments. Federal officials did not require institutions to produce performance data or indicators. Being totally dependent on one outside source of income, universities were faced with a tough dilemma when macroeconomic adjustment policies after 1984 led the federal government to cut spending in all areas. Real income for public higher education decreased by about 30% by the end of the decade. Since very few public institutions had the entrepreneurial capabilities to develop new sources of income, stagnation and conflict became the norm (Martinez, 1994). Since then federal funding policy has shifted toward more differentiated sources of funding and increased competition:

- a) Direct operational subsidies (for salaries, administration, and maintenance) have been closely geared to the number of federally approved employees at each institution. They have also been used to decrease enrollments at very large universities (Guadalajara, Puebla) and to increase them at very small institutions.
- b) Special funds for development projects were made available through a competitive review process. Most of these funds have gone into installing and upgrading computing infrastructure, internet capability, libraries, laboratories, and in some cases development of new programs.
- c) Although the base value of academic salaries was not significantly increased throughout the decade, individual performance grants were made available to full-time professors through a peer review process designed and managed at the institutional level. Researchers may compete for performance grants from the National System of Researchers (SNI)<sup>5</sup>. These grants are renewable on an annual basis (or tri-annually for SNI) and do not accrue to pension funds, thus lowering the overall cost to the federal government. For full-time academics, non-salary allotments now comprise between 30% and 50% of their total income.
- d) Universities were asked to raise fees and tuition. No updated data are available, but on average fees and tuition were raised from nominal values (in some cases insufficient to cover the administrative cost of charging them) to somewhere between US\$1,500 to US\$2,000 a year.<sup>6</sup>

The story of funding in this period cannot be told without reference to the financial crisis of 1995. After five years of strong growth, privatization of the public sector, tariff reduction and economic liberalization (in the context of NAFTA, signed in late 1993), public finances went into a tailspin, provoking high interest rates and subsequently a severe banking crisis. Macroeconomic stabilization once again became the principal federal priority, and budgets cuts ensued for all federal expenditures. Higher education and science lost about ten percent of previous funding levels,

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<sup>5</sup> SNI was set up in 1984 in an attempt to stop emigration of Mexican scientists at a time when macroeconomic adjustment policy generated deep cuts in spending for science and technology.

<sup>6</sup> Since this issue has always been politically very sensitive, it was interesting to learn that almost all state universities were able to raise fees without political turmoil. The important exception is UNAM, which to the present has found it politically impossible.

recovering them by the late 1990s. Macroeconomic instability is the specter that continuously looms in the background of federal policy, overriding policy priorities.

In 2006 gross federal expenditures in higher education constituted about 0.60% of GDP. Private expenditures have grown considerably, although reliable data is not available on this aspect. About 0.40% of GDP is spent by the federal government on science and technology, some of which naturally flows to universities. The Fox administration had promised to raise public expenditure in both aspects to 1.0% of GDP but was not able to comply with this commitment.

Between 85% and 95% of government funds are allocated to wages and benefits, with the rest going to construction, materials and other inputs. Public universities now charge tuition and fees on a variable basis, but this income rarely constitutes more than 10% of total institutional income. Scholarship funds that have recently become available go directly to students, once they have enrolled in a public institution, thus providing financial support but not a lever for choice to secondary school leavers.

### **Research and Development**

If compared to developed countries in North American and Europe, scientific research as a federal priority is relatively recent in Mexico. The National Council for Science and Technology (CONACYT) was created in 1970 to support research and development in universities. With the exception of large institutions such as the National University, the National Polytechnic Institute and the Center for Advanced Research (a non-university research and postgraduate institute founded in the early 1960s), universities were traditionally oriented to training professionals rather than producing knowledge or training PhD students. The decision was made to stimulate the development of research by a non-university governmental agency.

Funds were allocated by CONACYT on a competitive basis by means of peer review. Although over the past three decades CONACYT has varied its goals and procedures, certain general trend science policy stand out. Science policy was established by leaders in university research who were called into government, and for a decade CONACYT basically supported existing research efforts in institutions of higher education as well as research in public agencies in health, energy, and agriculture. It also encouraged the establishment of new research departments, as in the case of the Autonomous Metropolitan University (UAM) established by the federal government in 1974, arguably Mexico's first research university. An important aspect of science policy was – and continues to be – expanding the number and quality of scientific researchers by supporting PhD programs locally and funding scholarship grants for Mexican doctoral students to be trained abroad. Over the past thirty five years thousands of graduate students have been funded by CONACYT at home and abroad, a policy that is seen as necessary for a country that needs to expand its scientific capabilities but that is also criticized for the evident costs incurred by the “brain drain”.<sup>7</sup>

For most of the 1980s research policy succumbed to the intense financial stringencies resulting from the prolonged economic crisis of that period. Hyper-inflation and

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<sup>7</sup> In contrast, Canada and the U.S. are poles of attraction in the international market of science.

budget cuts not only constrained expenditures in science but in fact reduced them below the level reached in the previous decade. By the middle of the 1980s concern was vocally expressed by leaders of the scientific community over increasing emigration of scientists and the difficulties in attracting those being trained abroad to laboratories in Mexico that were actually losing resources, thus engendering the specter of widespread dismantling of the country's science base. With support from the federal executive, the National System of Researchers (SNI) was created in 1984 to provide continuous financial support – in effect, a system of individual grants – to researchers on the basis of peer review. Individual researchers – from private as well as public institutions<sup>8</sup> -- apply for the grant, their work is reviewed and if accepted they receive for a period of three years a monthly stipend that is tax-free and is allocated to the individual regardless of his or her institutional affiliation. The rationale for SNI was the paucity of government funds allocated to research through CONACYT and the lack of a research orientation in many universities, which when faced with severe financial constraints readily sacrificed the needs of scientists to other priorities. The number of SNI researchers, as they came to be called, grew from about 3,000 at its inception to about 10,000 in 2005<sup>9</sup>. The program is credited with damping the emigration of Mexican scientists in the 1980s but also with subsequently strengthening the research orientation in universities. The number of SNI researchers employed by a program or an institution soon became a recognized indicator of excellence, used by other funding programs for universities, thus forming part of the overall policy emphasis on quality.

In the *modernization* period after 1990, science policy took on new life, initially through a World Bank loan contracted by the federal government and aimed at restructuring CONACYT. Excellence and the internationalization of science were stressed. New programs for repatriation of emigrated scientists and for university-industry collaboration were set up. An important component of “new” CONACYT policy was the establishment of several non-university research and postgraduate centers of excellence throughout the country, aimed at specific areas most of which were oriented to technology development rather than basic science. At the same time that grants for graduate study abroad increased, there was a new emphasis on training graduate students in local institutions through the Program for Excellence in Graduate Programs, which funded programs that met certain requirements in terms of the number of SNI professors employed and the level of recognition of their research. SNI was incorporated to CONACYT, and a Presidential Advisory Council on Science was created. Expenditures in science and technology grew from \$2 billion U.S. to \$2.9 billion U.S. between 1995 and 2005, going from 0.35% to 0.38% of GDP in the same period (CONACYT 2006). This data shows a weak fiscal commitment to science, despite promises by the Fox administration to reach an expenditure level of 1% of GDP by 2006.

The Fox administration appointed a technologist from industry to head CONACYT for the period 2000 to 2006, thus breaking with a hallowed tradition of looking to the scientific community for leadership. Emphasis was consequently placed on links

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<sup>8</sup> The first and up to now the only federal funding program that supports both the private and the public sectors.

<sup>9</sup> Most members of SNI (82%) are full-time university professors, the total number of which in 2001 was 55,000. The remaining SNI members work as researchers in public sector research, such as the Institute of Health, Energy, and Agriculture.

between science and industry, using tax breaks and various incentives to firms. Efforts continued in the direction of decentralizing research policy through the joint support for state funding councils. Funding for research projects continued in the same vein as previously, but it did not increase at the rate initially promised by the Fox administration.

During this period, some notable developments occurred in the self-organization of the scientific community, most probably an indicator of greater numerical strength, increased status and political experience. The Mexican Academy of Science (AMC), founded two decades earlier as an autonomous professional organization, continued to grow, and it intensified its lobbying efforts vis-à-vis both CONACYT and the federal executive. The Academy was instrumental in the mid-1980s in developing the proposal for the National System of Researchers (SNI). Henceforth the Academy became increasingly concerned with science policy. It subsequently prepared diagnostic studies of science, in supporting the teaching of science in secondary schools and universities, as well as in promoting young researchers through prizes and Summer Research Programs in universities, a program which was implemented in conjunction with CONACYT. In 2006 the Academy prepared a general policy document (Paredes 2006) aimed at influencing the incoming federal administration in 2007.

### **Performance Trends**

#### **Performance**

A general summary of the themes identified in four states follows (Kent 2005):

|   |                                 |
|---|---------------------------------|
| States that have consistently institutionalized a local policy framework for higher education, through the creation of a state planning commission that operates with common criteria for all institutions  | GUANAJUATO                      |
| States that have taken steps toward a common policy framework but have not institutionalized a state commission with clear rules or reached consensus on planning with all institutions, either because of the autonomy of large public or private universities or because political leadership subordinates educational priorities to political convenience. | PUEBLA<br>NUEVO LEON            |
| States that have been unable to reach consensus over a common policy framework, because of political competition with the large state university  | JALISCO                         |
| Decision makers experiment with market forces as an intentional strategy, either to expand access and/or to make private institutions compete   | PUEBLA<br>NUEVO LEON            |
| The institutional universe has been intentionally diversified into two and four year, public and private institutions   | PUEBLA<br>GUANAJUATO            |
| Institutions control the type and amount of information made publicly available   | PUEBLA<br>NUEVO LEON<br>JALISCO |
| State wide accountability systems are being implemented   | GUANAJUATO                      |
| Subsidies for public institutions are negotiated politically  | PUEBLA<br>JALISCO<br>NUEVO LEON |
| States initiated R&D policy with effective linkages between firms and institutions  | GUANAJUATO                      |

It follows from this analysis that the state of Guanajuato has traveled farthest in creating a legitimate framework for higher education policy, whereas the state of Jalisco has covered the least ground. In the former state collaboration between the state government and the institutions of higher education, especially the state university, has been close, almost fraternal, leading to the establishment of a state planning commission with representation from all sectors of public and private higher education in the state. In the latter state, Jalisco, the large state university (the second largest university in the country, after the enormous UNAM) has consistently blocked policy initiatives by the state government whom it competes for political influence. The states of Puebla and Nuevo Leon may be seen as occupying a mid-point between these two extremes, where collaboration between the government and the principal public and private institutions is amiable, although it has not burgeoned into a fully institutionalized forms of state governance and leaves considerable room for unilateral decisions by the governor (particularly in the case of Puebla).

### **Preparation, Participation, Affordability and Completion**

In this section, a composite picture of changes in performance on these four indicators is presented for the four states covered in this study.

Following Giandomenico Majone (Majone 1989), we suggest that “the results of institutional change cannot be evaluated with reference to discrete, isolated decisions,

but must be assessed in terms of sequences of interdependent decisions taken by a variety of actors over a period of time”. We call these decision sequences, which by the way are closely tied to their context, “rule configurations”. With a view to linking changes in performance over a decade with types of policy, it seems useful to examine a general overview of changes in performance by state, as shown in the following table.

| <b>Changes in Performance by State, 1990 – 2000</b>  |            |           |            |            |
|--|------------|-----------|------------|------------|
| <b>Performance Indicator</b>   | <b>PUE</b> | <b>NL</b> | <b>GTO</b> | <b>JAL</b> |
| Preparation (a)  | L          | L         | H          | L          |
| Access/participation (b)   | L          | H         | H          | L          |
| Completion (c)   | L          | H         | H          | L          |
| Per capita cost (d)  | H          | L         | L          | H          |
| (a) A composite of preparatory school graduation rates and scores on entrance exams.   |            |           |            |            |
| (b) A composite of the percentage of 19-23 year olds enrolled, of preparatory school leavers going to higher education and enrollment per thousand population.   |            |           |            |            |
| (c) Time to degree   |            |           |            |            |
| (d) Total public expenditure on higher education divided by state population. (H) indicates high performance, meaning in this case a decrease (or stability) in per capita cost of higher education; (L) indicates an increase in per capita cost. |            |           |            |            |

According to this set of indicators, the state of Guanajuato has a higher performance than the other three states. It is also the state which has advanced farther in establishing consistent and consensual rules for its higher education system. On the other extreme, the states of Puebla and Jalisco score lowest in performance. Jalisco was typified as the state that made least progress in creating a coherent form of coordination for its system, whereas Puebla has achieved greater advances than Jalisco but less than Guanajuato. The northern border state of Nuevo Leon has an intermediate score on performance and an intermediate location on the scale of changes in rules-in-use. This brief summary seems to confirm the premise that those states where consistent changes in the rules lead to institutionalized and accepted forms of system coordination will improve their overall performance.

However, it cannot escape our notice that the state that scores highest on performance and changes in rules is also a state that has increased per capita costs for higher education. This measure means that higher performance in the state of Guanajuato has cost the individual taxpayer more than in other states. The exact significance of this contrast remains to be examined in greater detail, but one hypothesis may be advanced. States where per capita costs have not increased as much, such as Puebla and Nuevo Leon, have relied heavily on the expansion of private higher education to cover increasing social demand from a growing cohort of preparatory school leavers. On the other hand, as might be expected, performance on access and social participation in these two states is lower than in Guanajuato. From this perspective,

there might be a trade-off between controlling public spending and expanding social access. This is merely one policy dimension that might warrant further exploration.

## **Themes and Propositions**

In this section, we explore the ways in which seven themes our study has selected for international comparison are manifested in Mexico. The seven themes are as follows: the search for equal opportunity, quality improvement, labor force development, accountability, marketization, research and development, and responding to globalization. It makes sense to examine the rules of the game not as a snapshot of a single moment but as a cumulative process of policymaking and subsequent implementation and enforcement. In this vein, some attempts will be made to observe how rules develop meaning through the fluid processes of design, implementation, enforcement, and negotiation (Aman 2003). Some comments are also made on the implications and/or unforeseen consequences of policy.

### **Equal Opportunity**

Throughout the twentieth century, and especially in the wake of the Mexican Revolution (1910-1917) and the popular reforms of the 1930s, increasing access to primary education was a chief aspect of the political agenda. Year after year the President's annual report to Congress gave detailed accounts of the number of new schools and institutes that the government had built and the growing numbers of students enrolling in school. Providing access was considered to be a matter of more schools, professors and materials, with the implicit understanding that students of all social backgrounds would naturally flow toward educational opportunities. One crucial ingredient in this policy was not charging tuition or fees, a principle that is established constitutionally for basic education (K-9). Following this convention, public institutions of higher education did not charge tuition or fees either, a practice that was considered untouchable until the 1990s. Tuition charges, insufficient schools and badly chosen geographic locations for them were seen as the principal barriers to greater equity in education. Consequently, educational policy in Mexico has only exceptionally considered the need for student aid, either through scholarships or loans.

In this rationale, quality and effectiveness were taken for granted. Little was done to measure quality – or merely put it into question – and the problem of student dropouts was classified as an external economic issue, over educational institutions thought they had little influence.

Higher education expansion was not seriously considered until after the 1968 student movement put into question the lack of correspondence between growing numbers of secondary school leavers and elitist access to higher education. The 1970s and early 1980s brought a notable turnaround, with the federal government taking the lead in expanding existing universities, creating new ones and widening the network of

technical institutes. As mentioned previously, policymakers relied on the growth of the system and the tradition of non-restricted access (i.e., no entrance exams and no tuition charges) to relieve the political and social pressures of burgeoning demand.

The financial crisis of the 1980s put a drastic end to this policy. Since the 1990s increased access has been left to the expansion of the private sector and the public two and four year technical institutes. After a decade of emphasis on quality improvement, with minor importance attached to social access, it became clear that specific financial aid was required to assist needy students in finishing their studies. But no programs have been created to stimulate low income students in secondary school to complete their studies and move on to higher education.

For students moving into private higher education, there is no government assistance in providing information on the costs and quality of institutions and programs. This is not a trivial issue, in view of the fact that many low income students who do not pass entrance examinations to public universities end up in the low quality private institutions.

One consequence of these changes was to relegate the historic concern over access. Over a short period of time, policymakers were able to effect a radical change in educational discourse, which in turn made the equity issues less visible to analysts and institutional leaders. In addition, at the end of that decade it became clear that *modernization* policy had failed to stimulate sufficient enrollment expansion and had in fact aggravated indicators of inequity. Private sector expansion had absorbed students with fee-paying capacity of the middle and mostly upper social strata, but the new two and four year technical institutes distributed throughout the country in low income regions had accomplished little in the way of increasing access to these students.

In response to these emerging problems the Fox administration created a national grant program to low income students already enrolled in public two- and four-year institutions of higher education (PRONABES). Funding for this program is supported by both the federal and state governments and has increased significantly since 2001. Although this program is basically intended to improve completion rates by low income students, its existence does seem to provide an incentive for needy students moving from secondary to higher education.

Individual universities – often in collaboration with firms and professional associations -- have also created scholarship funds for their students. Reliable data on this type of support is not available. Clearly, the need provide individual students with economic support during their studies has taken root in the system of higher education. Concerns over equity are once more becoming important, although little has as yet been said about the links between equity and non-economic issues, such as academic support for student pathways originating in secondary school and articulation between two- and four-year institutions to facilitate student mobility.

### **Quality Improvement**

Quality has been an issue of the highest priority of federal policy for almost two decades. It is important to note that the term *quality* acquired a broad meaning in the

context of the disruptions that the economic crisis of the 1980s produced in the *transactional* mode that had prevailed hitherto. Improving quality represented the extensive efforts to turn the system around in the 1990s by creating new rules of the game.

Initially, modernization policies to improve quality covered everything from renewed investment in facilities, libraries and installations, upgrading academic personnel, reforming institutional management, to strengthening research and establishing evaluation systems. The Program for the Improvement of the Professoriate (PROMEP), funded upgrading graduate study for several thousand academics in public universities. This program was successively linked to other decisions. For example, all new academics hired on a full-time basis must comply with PROMEP qualifications (although this does not apply to part-timers). The National System of Researchers (SNI) is another component of this effort. PROMEP took a further step 2001 by establishing a new category of “academic clusters”, groups of well qualified professors in the various disciplines and subdisciplines, as recipients of funds for research and teaching. Institutions are henceforth evaluated on the strength of their academic clusters. Numbers of academic clusters and SNI researchers became accepted indicators of quality in institutions. It should not escape our notice that the definition of “academic” and of “professor” is now provided externally by the state, a fact that seems to have been quietly accepted by institutions but may represent a classificatory turn, to use institutionalist terminology (DiMaggio 1991), where a prime element of the traditionally internal organization of the academic system receives its legitimacy from external classification. The other side of the coin is that institutions themselves had proved themselves to be sufficiently debilitated academically to require such external redefinitions.

Simultaneously, a competitive funding program for upgrading institutional facilities (FOMES) was created. Further on, this program was folded into the strategic planning initiative developed in 2001. The evolution of both PROMEP and FOMES shows an increasingly clear focus on institutional development as the object of policy.

Evaluation was introduced in the early 1990s for graduate programs. The Center for the Evaluation of Higher Education (CENEVAL) was established to develop entrance exams. The Committees for External Evaluation (CIEES) appeared to provide external peer review of undergraduate programs.

An important implication of the new role of government in quality improvement was that institutional self-regulation had proved to be insufficient and required and stronger external action. This somewhat paternalistic attitude on the part of government authorities has a history of its own in the development of the state in Mexico. At first glance, it might be interpreted analogously to shifts in European higher education policy where the state was called upon to step in and shape up universities that had become complacent. Undoubtedly this would seem to be the case in Mexico, however the further developments led in different directions: whereas in some European countries the new steering mechanisms implied greater institutional autonomy (and responsibility) to act in a market-like situation, Mexican universities seem to have come under closer forms of external control.

## **Labor Force Development**

The labor market in Mexico is a very different scenario from the US and Canada. It is highly segmented: on the one hand, between large (mostly multi-national) firms and medium and small firms (which account for the vast majority of workers in Mexico); on the other hand, there is a vast informal sector (up to 35% of the employed population) as well as several million migrant workers in the U.S.

Generally, educational policy oriented to labor force development has been centered on existing educational institutions, such as technical high schools and technical institutes of higher education. In the 1990s, two-year post-secondary institutes were created to train workers for mid-level posts and entry posts to small firms and the local economy.

Whereas in Canada “policies were designed to adapt the structure of the economy, modernize companies, and develop value-added light industry in technology sectors” (Fisher), in Mexico the emphasis has been on upgrading the vast numbers of small and family firms.

In Mexico, similar themes emerged in the 90s but they were mostly World Bank programs for setting up on-the-job certification systems for re-entry into middle and higher education by workers who had left schooling to work.

Labor force preparation was traditionally considered a province of technical high schools, not tertiary institutions. Several federal systems of technical education at the secondary level have existed since the 1970s. Most graduates from these establishments either go into the labor force, but those who continue into higher education generally enroll in public technical institutes. The latter have grown considerably in number since 1991, under the new federal-state collaborative schemes.

One higher education initiative that was expressly set up to favor the insertion of mid-level technical personnel in small and medium firms is the creation of the two-year technical institutes (UT) as of 1991. These institutes are governed by a board incorporating representatives from local business communities and their curriculum is designed to adjust continually to local needs. More than fifty such institutes have been established throughout the country.

## **Accountability**

In the late 1990s, as the concerns over quality resulting from lax regulation of the expanding private sector became visible in the media and among policymakers, accreditation for programs in all institutions, public and private, acquired prominence on the agenda. In collaboration with the rectors’ association (ANUIES) and the association of private universities (FIMPES)<sup>10</sup>, federal officials created the National

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<sup>10</sup> It should be noted that the academically consolidated universities in the private sector (represented by FIMPES) were especially concerned with the small private institutes which mushroomed throughout the country. Since the consolidated institutions of the private sector traditionally relied upon their attraction for the elites, they became alarmed at the onslaught of low quality and low cost of the emerging private institutions.

Accreditation Council (COPAES) in 2000 to operate as an umbrella organism charged with granting approval to professional and scientific accrediting organizations and to verify their compliance with standards designed by the Council. Since that time, numerous accrediting organizations have sprouted up; as of July 2006 thirty accrediting organisms had been validated by COPAES, most of which appeared in response to COPAES. These associations had by the same date accredited programs in twenty seven private institutions and seventy six public institutions, including universities and two and four year technical institutes (COPAES 2006) from a total of over 2,300 institutions. By mid 2006 a total of 844 programs had been accredited out of a total of more than 5,000 programs nationwide.

It should be noted that the move toward accreditation also implies a shift in the direction of rewarding performance rather than just funding inputs. One criterion for accreditation has to do with performance measures on completion, for example. The link between funding and accreditation, in public institutions, is indirect but it is present and it undoubtedly represents a new direction.

An important aspect to be mentioned is financial accountability. Financial auditing, although it is not directly a component of higher education policy as such, has gained importance throughout all sectors of government, in part as the result of legislative changes in the late 1990s and also in response to increasing media criticism of the use of public money. Congress has on several occasions carried out special audits of public universities. Institutions of higher education are required to emit yearly external audits of their finances, and they may be audited at any time by either federal or state agencies. Rectors and upper level managers at public universities have reported in our field work that the new financial vigilance, although warranted, has pushed them to hire teams of accountants who would otherwise not be necessary and has raised the “transaction costs” of institutional management, thus introducing new rigidities. At some point, it seems, a contradiction may arise between the discourse on quality through institutional flexibility and innovation, on the one hand, and the push for accountability, on the other.

Accreditation is in its infancy, but the establishment of COPAES created quite suddenly a vast market for accreditations, which are charged to individual institutions. Such circumstances inevitably produce perverse consequences, such as collusion between institutions and certain accrediting groups. Accreditation is not obligatory by law, but funding for strategic plans hinges in part on obtaining accreditation for undergraduate programs, and institutions now publicize the quality of their programs by emphasizing the number of accreditations received. This situation seems to result in “policy feedback” where “policy creates politics”; these are situations in which “policy creates subsequent politics in terms of state capacities, understandings of social problems and development of constituencies” (Orloff 2005). Thus a new constituency of accrediting organisms has been created by policy to administer accountability. An increasingly complex system of higher education clearly requires the development of new forms of coordination, such as external accrediting organizations, and these in turn become part of the institutional structures around which further policy decisions will be built.

It must be noted that the role of the media in higher education has spread considerably. Over the past decade, national and regional newspapers have published

information divulged by international organizations, such as the OECD. Most such reports have been critical of quality in higher education, especially in the new private sector.

## **Marketization**

Mexican higher education had traditionally been considered a public service, offered by universities and technical institutes supported by government funds. In recent years, however, marketization has expanded considerably, often in the face of intense debate. Thus, there is no consensus as to the benefits of marketization.

It is instructive to contrast these trends with analogous developments in other countries. When regarding the general orientation of higher education policy in Europe in the 1990s, Vossensteyn and Dobson (Vossensteyn and Dobson 1999) point out that:

“In many countries, market-like mechanisms have been introduced into the traditionally public domain of higher education. The main drive for this has come from the government’s realization that it has only limited steering capacity through planning and control mechanisms. Many governments aim at enlarging the adaptive capacity, flexibility, efficiency and quality of higher education. In short, governments took a step back and, by implementing market-like policy instruments, they hoped to make higher education institutions more accountable and responsive to the needs of society. These new steering strategies have led to developments such as deregulation (by providing more autonomy to institutions); competition (between public and private institutions for student places and research funds); the implementation of quality assessment; and the introduction of or the raising of customer (tuition) fees.”

Some of these criteria are applicable for understanding the general direction of Mexican higher education policy but others are not. Many of the same instruments have been used in public institutions, such as raising or introducing student fees, establishing quality assessment, increasing competition for research and institutional development funds, promoting university-industry cooperation, and introducing partial merit pay for professors. The rationale seems to be similar to that cited above, namely the need to induce public universities to become more adaptive and efficient. One aspect that is not shared by the Mexican experience is greater autonomy for universities.

There is another dimension to marketization, the expansion of private institutions. Federal and state policy has welcomed the expansion of the private sector. This has occurred through two avenues. The first is the permissive dispensation of licenses for operating new private institutions. A second means through which private expansion has been supported is an indirect one: when first year enrollments to public universities were restricted in the early 1990s, growing numbers of students who traditionally viewed these institutions as their first choice were deflected to the private sector. The expansion of the private sector may be reaching a plateau, as evidenced by stabilized first year enrollments as of 2004. If this turns out to be the case, the reason

may be that private growth may have reached the limit of disposable income in middle and lower middle class families.

Federal legislation is rather vague about the attributions of private institutions of higher education. It amply establishes that they may operate once they gain approval by the relevant authorities, but little is said in matters of supervision or accountability. An important omission in the legislation, which has recently been pointed out the rectors' association (ANUIES 2006), is the lack of legal requirements for non-profit institutions as opposed to for-profit establishments. This loophole in fact allows many commercial enterprises in higher education to pose as non-profit educational establishments, resulting in lower taxes and other benefits.

Furthermore, there is almost no recognition that "incomplete information contributes to market failure where consumers must rely on suppliers for information about the need for services and their quality" (Richardson, 2006). Government authorities have not taken to heart the necessary public role in providing adequate information on costs and quality to prospective students. This omission is a notable one in a system that enrolls 35% of its students in private establishments.

Very limited government funds are made available to the private sector. Support for research by the National Science Council may be received by investigators in private institutions, but this is a rare phenomenon since private establishments are principally teaching institutions. The federal government backed a World Bank loan to underwrite a loan program for students in private universities affiliated to FIMPES, the main association in this sector. Various institutions have their own scholarship programs, often with support from large firms, but no government support flows to these programs.

Daniel Levy once stated that in Mexico "private higher education is really private and public higher education is really public" (Levy 1986). Although this is no longer true, there are nonetheless notable contrasts between both sectors. These trends reveal certain paradoxes and several contrasting dynamics at work. The system as a whole has undoubtedly become more market oriented, and the growth of the private sector has moved it in that direction. Public policy has also utilized market-like mechanisms to steer public institutions. But at the same time, in its stance toward these institutions government is today more interventionist and more intent on incisive planning than before. For its part, the private sector operates in an almost unregulated environment.

## **Research and Development**

It is obvious that research and development in Mexico is on a wholly different plane from countries like the United States and Canada, its principal commercial partners. Perhaps more significantly, Mexico also lags countries of comparative levels of development, such as India, Brazil or South Africa. One of the persistent frustrations of policy makers and scientists in Mexico is the difficulty in reaching higher levels of scientific and technological competency, as other similar countries have managed to do.

Over the past three decades public policy has created the National Council for Science and Technology (CONACYT), supported research in universities, established a new institutional model of public research and postgraduate centers, supported thousands of students abroad in PhD programs, created the National System of Researchers, and supported collaboration with industry<sup>11</sup>. A federal law for the development of science and technology was approved in recent years, and a specific budget line for R&D was incorporated into federal budgets. Currently about 28,000 professional researchers and technologists are working full time in these activities, in over 300 academic institutions and government research centers. CONACYT has accredited and funded a total of 704 “graduate programs of excellence”. Twelve state legislatures have approved laws for supporting science and technology, and twenty four states have established Councils for S&T.

However, performance has been consistently disappointing. Public expenditures on this sector have never surpassed 0.46% of GDP. In 2003 Mexico graduated 1,443 PhDs, in comparison to more than 7,000 in Brazil and 7,000 in Korea. For every thousand jobs only 0.9 are created in R&D, compared with 5.8 in the Czech Republic and 8.4 in Korea. In scientific publications, between 1991 and 2001 Mexican researchers produced 0.3% of the world total, whereas Argentina and Brazil published 0.4 and 0.7 respectively. Poor performance in patenting is also evident in the fact that in 2002 a high of six thousand patents were registered and this indicator is decreasing. On an international scale of the 60 most competitive countries, Mexico ranked 33 in the year 2000 and 56 four years later. In the academy and in industry insufficient posts are being created for the growing numbers of PhDs. A very small number of technologically intensive firms operate in Mexico, outside of transnational corporations (Vite-Leon 2005).

### **Globalization**

Except for graduate programs and research centers, where students and academics naturally learn other languages in order to communicate with their international peers, foreign language instruction has not been a priority for higher education in Mexico. There are no federal or state programs to support such activities, which are left to individual institutions. Learning English is a high priority for individuals and firms, who normally resort to a plethora of private academies for language instruction.

In recent years, especially since the signing of NAFTA, internationalization was put on the agenda for higher education policy. Language training is increasingly the object of specific institutional programs to train all undergraduate students. University departments have been established for supporting student and academic exchange (Castillo 2005). Institutions are increasingly paying attention to opportunities for exchange and study abroad offered by other countries. In Mexico the most prominent of these are the United States and Spain, which has intensified its outreach programs to all Latin America.

It is important to note the structural fact that, unlike Canada or the United States, Mexico is not a country of attraction for foreign students. On the contrary, there is today a widespread diaspora of highly Mexicans who have gravitated abroad.

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<sup>11</sup> The following data is mostly taken from Academia Mexicana de Ciencia (2006).

## References

- Aman, A. C. (2003). "Globalization, Democracy, and the Need for a New Administrative Law." Indiana Journal of Global Legal Studies **10**(1): 125-155.
- ANUIES (2006). Consolidación y avance de la educación superior en México: Temas cruciales para la agenda.
- Castillo, R. (2005). La internacionalización en la Benemérita Universidad Autónoma de Puebla, 1993-2003. Facultad de Administración. Puebla, Universidad Autónoma de Puebla. **Master's**: 106.
- CONACYT (2006). Informe CONACYT 2001-2005.
- COPAES. (2006). "Organismos acreditadores reconocidos por el COPAES." Retrieved 3 september, 2006, from [www.copaes.org.mx](http://www.copaes.org.mx).
- DiMaggio, P., and Walter Powell, Ed. (1991). The New Institutionalism in Organizational Analysis. Chicago, University of Chicago Press.
- Kent, R. (2005). A Comparative Analysis of State Adaptive Capacity in Higher Education Policy: the Mexican Case. 18th Annual Conference of the Consortium of Higher Education Researchers. Jyväskylä, FINLAND.
- Kent, R. (2005). Public Policy and Higher Education Performance in the the State of Puebla, AIHEPS.
- Levy, D. (1986). Private Higher Education in Latin America: Private Challenges to Public Dominance, University of Chicago Press.
- Majone, G. (1989). Evidence, Argument and Persuasion in the Policy Process. New Haven, Yale University Press.
- Medellín, R. (2005). Public Policy and Higher Education Performance in the State of Nuevo León, AIHEPS.
- Orloff, A. S. (2005). Social Provision and Regulation: Theories of States, Social Policies and Modernity. Remaking Modernity: Politics, History and Sociology. J. Adams, E. Clemens & A. S. Orloff, Duke University Press: 190-224.
- Paredes, O. (2006). Por un nuevo paradigma de política pública para el conocimiento y la innovación en México. México D.F., Academia Mexicana de Ciencia: 16.
- Ramírez, R. (2002). Public Policy and Higher Education Performance in the Sate of Guanajuato. New York, New York University: Alliance for International Higher Education Policy Studies.
- Vite-Leon, N. (2005). University-Industry collaboration in Mexico: lessons for public policy. Alliance for International Higher Education Policy Studies.
- Vossensteyn, H. J. J. and I. R. Dobson (1999). Hey, big spender! Institutional Responsiveness to Student Demand. From the Eye of the Storm: Higher Education's Changing Institution. B. Jongbloed, P. Maassen and G. Neave. Dordrecht, Kluwer Academic Publishers: 189-210.
- Rius, Andres, and Van de Walle, Nicolas (2003), "Political Institutions and Economic Policy Reform", International Development Research Centre (Canada). [Get web reference]